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Assessment of Kalamazoo County's Education for Employment (EFE) Programs Using 1997 Survey Data

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by

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Executive Summary

The Kalamazoo Regional Educational Service Agency (K/RESA)[1] administers a career and technical education consortium titled Education for Employment (EFE). The consortium members include all of the nine local school districts in Kalamazoo County, the Intermediate School District, and Kalamazoo Valley Community College (KVCC). EFE offers programs and activities to students from a wide range of grade levels, and its supports professional development activities for teachers. The largest share of EFE's mission, however, is coursework for high school students, and those activities are the subject of this study.

EFE classifies programs as either (1) school-based programs or (2) work-based programs. The school-based programs comprise 18 occupational clusters. Each of the 11 high schools in the county offer courses in one or more of these clusters and students from any of the high schools may enroll in them. Approximately 15 percent of the enrollment comes from another high school in the county. Four types of work-based programs are offered by EFE. Worksite-based classroom programs involve formal classwork at worksite settings. Workforce entry (or co-op) programs are paid work experiences in students' occupational areas of interest. Business/industry worksite training is paid or unpaid work experiences where there is no related instructional class either because there is not enough demand to support a class or because the class is not traditionally taught at the high school level. Apprenticeships are formally approved worksite and educational requirements that lead to a trade.

In Spring 1997, EFE contracted with the Upjohn Institute to collect information from four key stakeholder groups: students currently enrolled in EFE programs, parents of students currently enrolled, high school graduates who had participated in EFE programs, and employers. This document presents the results of analyses of the data that were collected.

Students

About half of EFE students were seniors, and the other half were underclassmen. Most of the latter were juniors. The students self-reported cumulative GPA was 2.8 on average, and their self-reported level of homework was 2.8 hours/week. The students reported relying on several sources of information when they decided to enroll in their EFE classes, but the predominant sources were guidance counselors, friends or acquaintances, and parents/guardians. About three-quarters of students were satisfied with all aspects of their class. The minority of students who were dissatisfied with EFE were disproportionately males and disproportionately nonwhites.

Twenty-two percent of the students indicated that they were in a work-based program experience. About two-thirds of these experiences were paid. The average wage was $5.75 per hour and the average hours/week was 16.5. Participants in these experiences were quite satisfied in terms

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[1]Formerly, the Kalamazoo Valley Intermediate School District (KVISD).

of how well the worksite experience related to their classwork and how supportive their workplace mentors were.

About 85 percent of students indicated that they were planning to attend a postsecondary institution either right after high school (74 percent) or after working for a few years (11 percent). More than 50 percent of the students aspired to white-collar, professional occupations. In particular, a higher percentage of females intended to enter white-collar, professional occupations than males. A total of 56 percent of students reported that they were employed (other than in a EFE work-based program.) They worked, on average, about 19 hours per week and earned $5.67 per hour. Minority students and students with work-based program experiences were more likely to report that the skills learned in EFE were useful in their part-time jobs than were whites or students without work-based experiences.

Parents

Parents were not particularly active participants in their students' decisions to enroll in an EFE class. About one-third of the parents/guardians indicated that they had no role at all. Among the two-thirds who indicated that they had played some role, most of the parents characterized their roles as having "little" or "some" influence. Parents/guardians who were involved mostly relied on student information. In 1997, parent use of high school handbooks and guidance counselor information increased significantly over 1996, however. For the most part, parents felt that the information they received was adequate. However, two areas in which the parents/guardians would have liked more information were descriptive content of the course and potential career ladders.

Many of the parents/guardians had met their student's teacher, but few had observed a class period. They were highly satisfied with virtually all aspects of their student's EFE class, but they felt less knowledgeable about textbooks and equipment/materials. Finally, parents/guardians were well-satisfied with the programs of the EFE consortium. They particularly liked the technical skills that were being taught and the introduction to the work world and real-life experiences for students.

Employers

Information was collected from a very small sample of employers, and so the findings must be interpreted with caution. Establishments that had had a student intern during the 1996-97 school year were called participants and establishments that had not had an intern were called nonparticipants. The final sample comprised 28 participants and 51 nonparticipants.

The establishment and workforce characteristics of participants and nonparticipants were similar. That is, none of the variables that we measured such as employment size, profit trends, human resource practices, occupational mix, use of temporary or part-time employment, or training practices were correlated with likelihood of participation.

The most important (self-reported) motives for participating with EFE were public-mindedness or altruism. Specifically, virtually every participating employer noted that they wanted to help improve the public education system or to contribute to the local community. The most often mentioned concern about internships by participants was student quality, exemplified by lack of basic skills, not always being available when needed, and unreliability and immaturity. Nonparticipants were also concerned about student quality, but their most often mentioned concern was liability issues.

Virtually all internships were characterized by a workplace mentor and involved a student in-person or screening telephone interview. About three-quarters of the internships included a written agreement, documentation and assessment of student learning, employer input to the school about curriculum content issues, and involved having students supply references.

Student interns were clearly productive in the workplace—they were assessed by employers as being just as productive or more productive than entry-level, permanent employees along many dimensions of job performance. About two-thirds of employers who participated in student internship programs were satisfied with their interactions with schools and students.

Program Completers

In addition to current students, parents of current students, and employers, this study also collected information from individuals who were classified as seniors in 1995/96 and enrolled in an EFE class at the end of that year. Program completers were almost perfectly divided into thirds among those attending a two-year institution, those attending a four-year institution, and those not attending either. Almost 40 percent of males were not attending school, whereas only a quarter of females were not attending. For the students who were attending a postsecondary institution, almost one in five name a business-related major or program field. Other fields with more than 10 percent of the students were education and graphic/fine arts. About two-thirds of the postsecondary students indicated that their major field or program was related to their EFE class.

All together, about 85 percent of the completers were working for pay at the time of the survey. The employment rates of whites, students who participated in a work-based program, and students attending a four-year postsecondary institution were significantly higher than minorities, students who did not participate in a work-based program, and individuals who were attending a two-year institution or were not attending a postsecondary institution. Almost 25 percent of minorities were not working. The official unemployment rate for the sample was 10.8 percent.

For those who were working, the average work week was about 35 hours, the average wage was $6.85 per hour, and just over 40 percent indicated that their EFE classes were relevant to their jobs.

Completers were asked to rate their satisfaction with the EFE courses and work-based program experiences that they had taken in high school. They were highly satisfied and gave ratings that exceeded the levels that were given by current students. Between 80 to 95 percent of the respondents gave favorable ratings to questions about eight different aspects of the classes. When asked to provide the three best aspects and the three worst aspects about EFE programs, the completers mentioned "no worst aspects" the largest number of times of any response.

Two EFE outcome indicators were calculated. About 92 percent of completers were either attending college or were employed one year after completing their high school courses. The second indicator measures the percentage of individuals who were pursuing a major field or occupational program area in a postsecondary setting that was related to their EFE coursework or who were employed in a job where their EFE coursework was related. This indicator was about 61 percent.

Recommendations

The report culminates with several recommendations for EFE administrators to consider. These recommendations are listed here. A full explanation of the recommendations and their bases in the data is provided in the last chapter of the report.

- *EFE offers excellent programs that result in high levels of customer (stakeholder) satisfaction.*

- *EFE has some excellent teachers who are impacting students. Even many EFE completers report one year after their enrollment that their favorite aspect of the EFE class was their instructor. But EFE also has some teachers that are not liked or impacting students. Thus, like any organization, EFE needs to have rewards/ incentives and sanctions/correctives.*

- *Parents/guardians play a passive role in enrollment decisions, but they should not be overlooked. EFE should send them information that includes course content and student expectations as well as economic outcomes such as expected employment, career ladders, and wage rates.*

- *Guidance counselors are key gatekeepers to EFE enrollment. EFE should keep them well informed about classes and opportunities.*

- *Academic teachers should not be overlooked as important gatekeepers for EFE. They should receive information about EFE programs and opportunities.*

- *A high share of the students who enrolled in EFE classes, and work-based experiences in particular, pursued postsecondary education at two- and four-year institutions.*

- *Standards and student expectations could be ratcheted up; projects and homework assignments should be interesting, challenging, and essential.*

- *EFE needs to improve the alignment between work-based experiences and school-based learning. Employers should always be asked for input and asked to evaluate school curricula.*

- *EFE should attempt to get a higher percentage of students in work-based experiences to have the chance to rotate through several occupations.*

- *A large share of EFE students hold part-time jobs which could be a significant learning resource, if an appropriate mechanism to integrate these experiences into the curriculum could be devised.*

- *Work-based experiences are matching students with caring and supportive workplace mentors. Little priority should be placed on mentor training since the status quo seems to be working very well.*

- *Students participating in work-based programs are productive. They're doing real work as well as or better than comparable employees. Many of the comparable employees have some postsecondary education.*

- *Employers' biggest concern about student interns is their lack of skills and maturity. This concern can be addressed by reminding employers that the students are in learning situations and they may make mistakes and by working with students to emphasize the importance of their behavior at the workplace.*

- *It is unlikely that the number of employers willing to offer work-based program "slots" is the constraint on the availability of this type of learning experience. Many of the nonparticipant firms that were surveyed had not been approached, and two-thirds of them indicated that they would consider participating if they were asked.*

- *In "selling" EFE to employers, staff should refer to potential benefits in existing employee morale.*

- *Minorities are less satisfied with their EFE experiences and have much lower rates of positive outcomes than whites. Two recommendations are that EFE (1) consider whether they could play a role in placement for ex-students and (2) consider establishing an ombudsman staff person who could advocate for minorities or other students with problems.*

- *The career aspirations of EFE students seem skewed toward white collar, professional occupations. EFE might consider an effort to inform students and parents about the employment and earnings payoffs to clerical, craftsperson, and technician occupations.*

- *This assessment does not examine the important issue of student academic achievement.*

A Final Caution

To the author's knowledge, few other educational programs have collected and analyzed the type of market information that is presented in this assessment. Thus EFE is in a unique position to be able to respond appropriately to its customers. Overall, that customer base is quite satisfied with the instruction and student outcomes that EFE provides. However, a number of areas of improvement have been identified.

It is particularly important to understand the limitations of the analysis. No data were collected about students who did not participate in EFE programs. Consequently, we can not draw evaluative conclusions. In particular, we can not be critical of EFE because of the lower satisfaction indicators and outcomes for minorities, or other groups. A heuristic example may be used to explain why. Suppose that a particular outcome for all secondary students in Kalamazoo County were measured, e.g., educational satisfaction or employment rate. We might find that, on average, this indicator was 70 percent for minority students and 80 percent for whites. Furthermore, we might find that the indicator was 80 percent for minority students who had enrolled in EFE programs and 85 percent for whites in EFE. The obvious conclusion would be that EFE was achieving success for all students, but relatively more success for minorities even though data from EFE might find a statistically significant difference between whites and minorities. Of course, if the overall county average for the indicator were 80 percent for both minorities and whites, then we would reach a different conclusion. Unfortunately, all this report can document is the differential among EFE students.

Nevertheless, despite this caution, EFE is to be commended for its commitment to measuring and assessing the information presented in this report. The broad base of information can be used to develop and implement program improvements.

1. EFE Programs

The Kalamazoo Regional Educational Service Agency (K/RESA)[1] administers a career and technical education consortium titled Education for Employment (EFE). The consortium members include all of the nine local school districts in Kalamazoo County, the Intermediate School District, and Kalamazoo Valley Community College (KVCC). EFE offers programs and activities to students from a wide range of grade levels, and it supports professional development activities for teachers. For example, the consortium presents a career introductory program to districts' first graders using puppets; a career exploration day for all 8th graders in the county; job shadowing experiences for 10th graders; a variety of career and technical education programs for high school students; and services for community college students (through the Tech Prep program). An example of its professional development activities is Why Math?, a teacher internship program in which middle school and high school math teachers visit local businesses to observe and learn how mathematics is used in the workplace. The largest share of EFE's mission, however, is the coursework for high school students, and those activities are the subject of this study. Note that most course offerings are fully articulated with KVCC and with Davenport College allowing students to obtain transferable college credits.

EFE classifies programs as either (1) school-based programs or (2) work-based programs, but this simple dichotomy does not do justice to the wide variety of offerings. The school-based programs comprise 18 occupational clusters—accounting/computing; agriscience; automotive collision repair; automotive technology; business services technology; child care; commercial

[1]Formerly, the Kalamazoo Valley Intermediate School District (KVISD).

design; construction trades; drafting technology; electro-mechanical technology; graphic and printing communications; heating, air conditioning, and refrigeration; machine tool technology; manufacturing cluster; marketing; paper technology; photography; and radio broadcasting. Each of the 11 high schools in the county offer courses in one or more of these clusters and students from any of the high schools may enroll in them. Approximately 15 percent of the students enrolled in these school-based programs comes from another high school in the county.[2]

EFE offers four types of work-based programs. The first type, referred to here as **worksite-based classroom programs**, involves formal classwork at worksite settings. EFE has established programs in six occupational areas. In each of these occupational areas, local businesses, nonprofit organizations, or government agencies have provided classroom space and have worked with EFE on developing curriculum and on-the-job experiences. These programs include a two-year health occupations program offered at a local hospital, a two-year hospitality program offered at a hotel, a two-year law enforcement program offered at a community probation facility, a two-year plastics program at a plastics manufacturer, a two- or three-year theater technician program at a community auditorium facility, and a cosmetology program at two local beauty academies. In all cases, these innovative programs extend beyond classroom instruction to actual experiential learning. As with all EFE course offerings, these programs are open to and attended by students from all 11 high schools in the consortium. For most of the programs, the facilities are able to accommodate all the students who are interested in enrolling. In one or two, however, space and instructor availability constrain the programs, so that "slots" are allocated across districts.

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[2]In Fall 1996, 12 students from schools other than the 11 high schools that comprise the EFE consortium were enrolled in school-based programs or work-based programs. Most of those were students from the two private, religious-affiliated high schools in the county.

The second type of work-based program is called **workforce entry**, or **co-op**. These are paid work experiences in students' occupational areas of interest. In all cases, students are enrolled in a school-based program simultaneously with the co-op experience and the workforce entry activity is meant to enhance the school-based program. In Fall 1996, about 210 students from all 11 high schools in the county were engaged in workforce entry experiences. The intent of these experiences is to supplement and contextualize the school-based program by providing actual employment in the occupational cluster that is being taught.

The third type of work-based program is called **business/industry worksite training**. It is tempting to define this program as unpaid workforce entry (co-op) experience, but that description is not accurate for four reasons. First, these activities are offered to serve students interested either in (1) occupational areas that do not have sufficient student interest to fill a (school-based program) class or (2) occupational areas that are not traditionally taught at the high school level. For example in Fall 1996, 101 students engaged in a teacher externship program to explore teaching as an occupation. Clearly, this is an occupational area that is not traditionally taught in secondary schools, but these externships allowed students to begin to gauge their interest in teaching as a career. An additional 32 students had training in veterinarian assistance, paralegal, aviation, TV production, and a few other occupational areas where there was not enough enrollment to fill a class. A second reason why these experiences are different from an unpaid co-op is that EFE staff are proactive in establishing content guidelines for the employer/supervisors to follow. The EFE staff members who develop these positions consult with employers to determine objectives, content, and assessment standards. The workforce entry (co-op) experiences supplement existing courses, so the objectives and content have been developed. The business/industry worksite training positions are offered

precisely because there are no related courses, so the objectives and content need to be developed. Third, there is no requirement of students to take a school-based program in concert with the worksite training because there are no related courses. Fourth, some students get paid.

The final type of work-based program is **apprenticeship**. Individuals with apprenticeships are working for pay outside of school just as the co-op students are. However, in this case, the employers have agreed to provide the students with the experience and postsecondary education requirements of a formal U.S. Department of Labor-approved apprenticeship leading to journey-person status. In Fall 1996, EFE had eight students in formal apprenticeships.

In Spring 1997, EFE contracted with the Upjohn Institute to collect information from four key stakeholder groups: students currently enrolled in EFE programs, parents of students currently enrolled in EFE programs, high school graduates who had participated in EFE programs, and employers. The high school graduates were surveyed approximately one year after graduation.

The next section of the paper documents the methods that were used to collect the data. This is followed by a section that presents data from the survey of current students. Next, data from the parent survey are discussed. Then, findings from the employer data are analyzed followed by a section presenting data from the follow-up survey of high school graduates. The final section of the paper summarizes the major findings from the data collection activities and offers some recommendations for the EFE program to consider.

2. Methods

The intent of the data collection efforts conducted through this study was to obtain a statistically valid, broad "snapshot" of the various stakeholder groups rather than an in-depth analysis of a few individuals.[3] Consequently, surveys were designed and conducted rather than using focus groups or personal interviews.

The first survey was administered in May 1997 to all students in EFE school-based or work-based programs. The survey collected data about the students' high school experiences, the information that they used to decide to enroll in the EFE class or program, their experiences in and opinions about the class/program, and their career and postsecondary plans. We estimate that there were approximately 2,300 students enrolled at the time of the survey, and we received 1,475 usable responses (a response rate of about 60 percent). The second survey that we conducted was a mail survey of a sample of parents/guardians of current EFE students. A random sample of 500 parents were selected to receive the survey. Responses were received from 160. This computes to a 32 percent response rate, which is reasonable for a mail survey. The subjects covered in this brief survey included information about enrollment in the EFE class or program, opinions about the class/program, and general reactions to the EFE consortium.

The third survey that was used to collect data for this study was a telephone survey of employers. Two samples were surveyed. The first sample, comprising 75 employers, was derived from a local directory of business establishments supplemented with a list of nonprofit and public

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[3]K. Hollenbeck, "In Their Own Words: Student Perspectives on School-to-Work Opportunities," National Institute for Work and Learning, Washington, DC, 1996, provides an in depth examination of EFE students' perspectives.

organizations. Establishments with less than 10 employees were deleted from the list, and then a random sample was drawn. This sample is therefore representative of the county's employers with at least 10 employees. A second sample, again with 75 organizations, was drawn from a list of employers who participate in EFE. Unlike the 1996 employer survey, a single questionnaire was administered to all respondents. A total of 78 employers responded to the survey (a response rate of 52 percent; 41 of the representative sample responded and 37 of the EFE sample responded).

The final survey was a telephone follow-up of students who had completed their EFE class during the second semester of 1995-96. For the most part, they were individuals who had graduated from high school in May or June 1996 and who had been enrolled in an EFE class or program at the end of that year. The State of Michigan mandates and regulates this survey because funding for career and technical education in the State is partially determined by the data from this survey. The main purpose of the survey is to measure postsecondary and employment outcomes. Because we were administering the State's survey in Kalamazoo County, we took the opportunity to add a few questions aimed at gauging satisfaction with the EFE classes/programs. The response rate for this survey was under 40 percent, much lower than the response rates for the 1996 follow-up survey. Attempts to contact just under 1,000 students were made, and we received usable data from 322. The main reasons for nonresponse were that the data system had recorded wrong telephone numbers or that students had moved and could not be traced. We estimate that these problems were encountered for over 200 students. Refusals and inability to contact students within the time frame of the survey were the primary reasons for the remainder of the nonresponse.

3. EFE Students

This section of the report presents characteristics of students who enroll in EFE programs. Data were collected about the students' high school experiences, factors that influenced enrollment into EFE classes, opinions about EFE programs, experiences with work-based programs, postsecondary and career plans, and current employment. For most of these data, we have disaggregated the information to examine differences between males and females, whites and nonwhites, and whether or not the students were in a work-based experience. We also compare and contrast results from the 1997 and 1996 surveys.

High School Experiences

Table 3.1 provides summary data about the students' overall experiences in high school. Note that all of the data were self-reported, and as the previous section of the report pointed out, about 60 percent of the students responded to the survey. A little more than half of the respondents (53 percent) were males. About 20 percent indicated that they were nonwhite. Also, about 20 percent of the respondents indicated that they had been engaged in a work-based program.

Just under 15 percent of the students were freshmen or sophomores. Approximately half of the remaining respondents were juniors and half were seniors. This was true for both sex and both racial groups. However, individuals who reported that they were in work-based learning situations were preponderantly seniors (by about a 3-to-1 ratio).

Respondents averaged about 2.8 hours of homework per week, which represented about a 10 percent increase over the 1996 average. Females averaged just short of an hour more per week

Table 3.1
High School Experiences and Characteristics of EFE Students

Characteristics	Sex		Race		Work-based program		Total
	M	F	W	NW	Yes	No	
Class standing							
Freshman	3.4%	1.9%	3.2%	2.3%	1.5%	3.4%	3.0%
Sophomore	11.0	9.8	11.4	6.4	1.5	12.9	10.4
Junior	41.6	39.6	40.3	42.3	22.9	46.2	41.0
Senior	44.0	48.7	45.1	49.1	74.1	37.5	45.7
Homework (average hours/week)	2.4*	3.2	2.7*	3.1	2.5	2.8	2.8
High school grade (cumulative gpa)	2.75*	2.92	2.87*	2.68	2.87	2.80	2.81 (B-)
High school activities (average no. /year)	2.3*	2.7	2.5	2.4	2.5	2.5	2.5
Tardies (average no./year)	7.4*	5.9	6.3*	8.1	6.8	6.9	6.9
Absences (average no. /year)	6.3	6.7	6.2*	7.7	7.1	6.6	6.7
Sample Size	786	689	1,179	296	1,148	327	1,475

*Difference between population groups is statistically significant at the .05 level.

than males (3.2 to 2.4), which was a statistically significant difference. Nonwhites averaged about .4 hours more homework than whites, and this difference was also significant.

The students were asked about how many extracurricular activities they participated in both in and out of school. On average, the students indicated that participated in about 2.5 activities. Females participated in more activities than males (2.7 to 2.3). There were no differences between whites and nonwhites nor between those with work-based experiences and those without.

The students were asked to categorize themselves in terms of their cumulative grade point average (gpa). We converted the categories into a 4-point scale, and found that the average gpa in the sample was 2.81 (B-). This is identical to the average for the 1996 survey. All of the differences between the demographic groups were significant. Females averaged about 2.9 compared to 2.7 for

males. Whites averaged around 2.9 compared to 2.7 for nonwhites, and students with work-based experiences averaged just under 2.9 compared to 2.8 for the remainder of the EFE students.

The last items in the table are average number of absences and tardies during the school year. The overall averages for the entire sample were about 7 incidents of tardiness and 7 days of absence.[4] (Assuming there were about 180 days of instruction, these averages work out to about 4 percent.) Females reported having less tardiness than males (about 6 instances compared to 7.4), and whites had less tardiness than nonwhites (approximately 6 instances on average as compared to 8). Individuals with work-based experiences had the same amount of tardiness as individuals who did not have a work-based experience as part of their EFE program. Females reported more absences (6.7 compared to 6.3, on average) and individuals with work-based experience averaged 7.1 compared to 6.6 for the rest of the sample. These differences were not statistically significant. However, the difference in the average number of absences for whites (6.2) and nonwhites (7.7) was significant. It is noteworthy that the instances of tardiness were about 10 percent lower in this survey than in last year's survey and the absences were about 5 percent lower.

EFE Enrollment Decisionmaking

Students were asked about how they learned about the EFE class that they were enrolled in: sources of information and individuals. Table 3.2 presents summary data for these issues. The entries in the table are composed of two numbers. The first represents the proportion of the respondents who reported that they used each of the information sources or got assistance from

[4]Note that the question asked students to report absences for any reason, *other than illness*. It is possible that some respondents misread the question and reported all absences.

Table 3.2
Sources of Information and Individuals who Assisted in Decisionmaking about EFE Class

Source/Individual	Sex		Race		Work-based program		Total
	M	F	W	NW	Yes	No	
Information source used/most important							
Guidance counselor advice	.60*/.29*	.71/.38	.65/.33	.66/.33	.71*/.38*	.62/.31	.64/.32
Poster	.24/.02	.25/.02	.23*/.02	.34/.03	.24/.02	.25/.02	.25/.02
Academic subject teacher	.29/.09*	.33/.13	.30*/.10*	.37/.14	.29/.11	.31/.11	.31/.11
Technical ed. teacher	.31/.11	.33/.12	.31/.11	.37/.13	.35/.11	.31/.12	.32/.11
Brochure	.27/.04	.31/.06	.28*/.04*	.34/.07	.27/.04	.30/.05	.29/.05
High school handbook	.62*/.29*	.70/.37	.67/.33	.61/.30	.62/.27*	.65/.33	.64/.32
Friends/acquaintances	.60*/.37	.65/.37	.64/.40*	.58/.27	.63/.38	.61/.36	.61/.37
Brother/sister - family	.31/.12	.33/.13	.31/.13	.36/.12	.33/.14	.31/.12	.32/.12
EFE staff presentation	.27*/.06*	.33/.11	.30/.09	.31/.07	.29/.11	.29/.08	.29/.09
Employer	.21/.04	.24/.05	.21*/.04*	.30/.07	.24/.07*	.22/.04	.22/.05
Other	.02/.02	.02/.02	.02/.02	.03/.01	.03/.02	.02/.01	.02/.02
Individual who assisted/most important							
Guidance counselor	.58*/.28*	.68/.37	.62/.33	.66/.30	.67*/.38*	.60/.30	.61/.32
Academic subject teacher	.26*/.07	.31/.09	.26*/.07*	.37/.13	.25/.09	.29/.07	.28/.08
Technical ed. teacher	.26/.06	.28/.08	.26*/.07	.33/.08	.27/.08	.27/.07	.27/.07
Other school administrator	.21/.03	.23/.04	.20*/.03	.28/.05	.20/.05	.22/.03	.21/.04
Parent/guardian	.45*/.23*	.56/.34	.51/.28	.50/.27	.49/.24	.49/.28	.49/.27
Friends	.50*/.28	.56/.30	.54/.31*	.48/.23	.50/.28	.53/.28	.52/.28
Brother/sister	.27/.08	.28/.11	.26*/.09	.34/.11	.26/.08	.27/.09	.27/.09
Employer	.20/.03	.21/.03	.19*/.03*	.27/.05	.23/.07*	.20/.02	.20/.03

Note: Table entries are the proportion of the sample who used the information source (top panel) or who got assistance from the individual (bottom panel) followed by the proportion of the sample who reported that the information source or individual was among the most important. Sample size is 1,475.

* Difference between population groups is statistically significant at the .05 level.

particular individuals. The second number, after the slash, is the proportion of students who said that each source of information or individual was among the most important. For example the first entry in the table is .60*/.29*. This means that 60 percent of the students reported that guidance counselor advice was a source of information about their EFE class, and that 29 percent of the students indicated that guidance counselor advice was among the most important sources of information. (The asterisks indicate that the 60 percent for males is statistically significantly

different from the 71 percent for females and the 29 percent for males is statistically significantly different from the 38 percent for females.)

The data show that about two-thirds of the students relied on guidance counselor advice, high school handbooks, and friends as sources of information about the EFE classes. About a third of the students relied on advice from an academic subject teacher, a technical education teacher, a sibling, or EFE staff presentations. The most important sources closely aligned with the overall reliance. Friends, guidance counselor advice, and high school handbooks were the most important information sources. Note that posters and brochures were used by around a quarter of the students, but they were cited as the most important sources by less than 5 percent of the students.

A number of the differences in the proportions among the sex, race, and work-based experience groups were significant. Females reported a greater reliance on guidance counselors, academic subject teachers, high school handbooks, and EFE staff presentations than males. Nonwhites reported more information sources than whites (except for high school handbooks and friends/acquaintances), which may indicate that EFE made a successful attempt to get more information to nonwhites. The differential between nonwhites and whites narrowed since 1996, however. The sources of information used by a higher proportion of nonwhites than whites were: posters, academic subject teachers, brochures, and employers. Peers apparently play a more important role in enrollment decisions for whites than for nonwhites. Two-fifths of the whites indicated that friends/acquaintances were among the most important sources of information for whites versus only about one-quarter for nonwhites. Students who were in work-based education programs tended to rely more heavily on guidance counselor advice and employers than did other EFE students.

The bottom panel of the table reports which individuals were influential in the students' decisions to enroll in EFE. Guidance counselors were mentioned most often by respondents both as individuals who assisted and the most helpful individuals. Friends were next, followed closely by parents/guardians. Among the groups, females reported that they tended to be assisted by guidance counselors, friends, parents/guardians, and academic subject teachers more than did males. Nonwhites were assisted more often by teachers and employers than were whites. Whites were somewhat more reliant on friends. Students in work-based programs were assisted more often by guidance counselors and employers.

All in all, the data in this table closely mirror the 1996 information. The only systematic difference seems to a slippage in the importance of the role of guidance counselors; in providing information and assisting in course enrollment decisions they were approximately 5 percent less influential according to these data.

Opinions about EFE Classes

The students were presented with a number of survey questions to gauge their opinions about their EFE classes. They were asked to provide their opinions concerning different aspects of the course; they were asked to assign a letter grade (from A to F) to assess the quality of the course; and they were asked open-ended questions about the three best and three worst things about the class. Table 3.3 provides summary information from the opinion questions and the letter-grade assignment. The top portion of the table presents the percentage of students who agreed or strongly agreed with various statements about their EFE class. (Note that some of the questions were worded negatively,

Table 3.3
EFE Class Satisfaction Indicators

Indicator	Sex		Race		Work-based program		Total
	M	F	W	NW	Yes	No	
Agree/strongly agree with "This course is one of the best..."	74	75	76*	68	79*	73	75
Disagree/strongly disagree with "This course is too hard..."	81*	87	85*	80	85	83	83
Agree/strongly agree with "I get along with other students and we work together..."	81	84	83	80	80	82	82
Agree/strongly agree with "The equipment and facilities meet the needs..."	73*	84	79	77	75	79	78
Disagree/strongly disagree with "Not enough information..."	70*	79	76*	67	75	74	74
Agree/strongly agree with "This course treats everybody fairly..."	71*	79	77*	65	75	74	74
Agree/strongly agree with "I can get questions answered..."	71	74	74*	66	73	72	72
Disagree/strongly disagree with "This course is disorganized."	68*	74	71	70	69	71	70
Average grade for course quality (converted to 4.0 scale)	3.27	3.35	3.35*	3.14	3.33	3.28	3.29(B+)

Note: Table entries for the first eight rows are percentage of the sample who gave a favorable rating of 1 or 2 (or 4 or 5 for the negatively worded items) on a 5-point Likert scale. Item nonresponses are not included in the denominator. However, response of "Neither agree or disagree" is included. Overall sample size is 1,475. Approximately 80 responses are missing for each item. Sample size for average letter grade is 1389.

*Difference between population groups is statistically significant at the .05 level.

so we tabulated respondents who disagreed or strongly disagreed in these cases.) The entries in the columns can be interpreted as indicators of student satisfaction.

Note that the levels of satisfactions are reasonably high—all ranging between 70 percent to 83 percent. The first opinion question asked students to agree or disagree with the statement that the EFE course "is one of the best courses that I have had in high school." Three-quarters of the students agreed with the statement, with stronger levels of agreement from whites and students who were in work-based programs. The next item asked for agreement or disagreement with the statement, "This class is too hard." Here, just under 85 percent of the students disagreed. A higher percentage of females disagreed with the statement than males did and a higher share of whites disagreed than nonwhites. It should be recognized that students would disagree with this statement if they felt that the class was too easy, so that we cannot interpret all of the responses as positive indicators.

The third statement was, "I get along well with other students and we work together well in the class." Overall, about 80 percent of the students agreed with this statement with no differences among the subgroups of students. The next item was intended to measure student opinion about the equipment and facilities in the classrooms. The item was phrased, "The equipment and facilities meet the needs of the course." Overall, 78 percent of the students agreed with this statement, but male students were in less agreement than females.

The next survey question asked students about whether they thought enough information about the course had been given to students and families. Overall, about three-quarters of the students were satisfied, but males and nonwhite students had lower levels of satisfaction than their population counterparts. The following item asked whether everyone was treated fairly in the course. The results were virtually identical to the previous question; about three-quarters of the respondents were satisfied, but males and nonwhites were less satisfied.

Students were asked for their agreement with the statement, "I can get questions answered easily in this class." Nonwhite students were in less agreement than whites on this item suggesting that they may have perceived less access to instructors. While the difference between whites and nonwhites was significant, note that at least two-thirds of all population groups in the sample were satisfied. The last opinion question was disagreement with the statement that, "This course is disorganized." Again, males were unhappier than females—68 percent of males disagreed or strongly disagreed as opposed to 74 percent of females. No other differences between groups were significant, and the proportion of the overall sample that disagreed with the statement was 70 percent.

The average grade for course quality is given in the bottom row of the table. The sample average of 3.29 indicates that students were quite satisfied with their classes. Consistent with the individual items, a significant difference exists between whites (whose rating for the class averaged 3.35) and nonwhites (whose ratings averaged 3.14.)

Both the 1996 data and the 1997 data show a high level of student satisfaction with their EFE classes. High levels of agreement with the opinion items were supplemented by assignments of high "grades" for quality of the classes. What is different from last year's data is that in the 1996 data the subgroups of the population that were relatively less satisfied with EFE were females and nonwhites; whereas in the 1997 data, it was males and nonwhites. Furthermore, the higher levels of course satisfaction expressed by students with work-based programs in 1996 have lessened to some extent.

Table 3.4 provides data about the students' responses to the open-ended questions about the best and worst aspects of their EFE classes. Almost 1500 students responded to the survey, so the potential number of best aspects and worst aspects that could have been named was 4500. In fact, a little over 3200 positive aspects were named and a little over 2000 worst aspects were named. This, in itself, is positive for EFE: respondents could more easily name positive characteristics than negative ones. Among the best aspects, students were most appreciative of the skills they were learning and the "real world" experiences they were having. A comment to this effect was made by over a quarter of the students. The next factor most often mentioned was a specific teacher or other staff person (named by 15 percent of the sample). After these two aspects, the next highest rated items were the instructional materials, the other students in class, and the pace of instruction.

On the other side of the ledger, the item that was mentioned most often as among the three worst aspects was that the course required too much work. Of the total number of responses to this question, this type of response was received over 20 percent of the time. About one-eighth of the respondents singled out a specific teacher or other staff person as another of their three worst items. Interestingly, 139 students (almost 7 percent of the sample) indicated that they were happy with their EFE class and they could not name a worst aspect.

Table 3.4
EFE Class Best and Worst Aspects

Aspect	Number of times mentioned	Percent
Best aspects		
Equipment	195	6.0
Books/software	245	7.6
No homework/tests	44	1.4
Pace	246	7.6
Specific teacher	483	15.0
Work-based learning	212	6.6
Skills, experience	828	25.6
College usefulness	51	1.6
Hands-on	199	6.2
Other students	270	8.4
Other	447	13.8
Nothing	10	0.3
Total	3,230	100.0
Worst aspects		
Equipment problems	141	7.0
Books/software	183	9.1
Too difficult	68	3.4
Too easy, boring	173	8.6
Too much work	428	21.3
Student: teacher ratio	57	2.8
Specific teacher/staff	265	13.2
Schedule problems	126	6.3
Class environment	72	3.6
Classmates	144	7.2
Other	191	9.5
No worst comments	139	6.9
Unfair	23	1.1
Total	2,010	100.0

Note: Columns may not add to 100.0 due to rounding. Sample size is 1,475.

Work-Based Experiences

Table 3.5 shows that less than a quarter of the sample participated in work-based program experiences. The percentages were higher for females than for males and for whites than for nonwhites. Over 60 percent of the students who participated in a work-based experience received pay, and on average, the pay was $5.75 per hour. The percentage of males who were paid for their work-based experience is higher than the percentage of females, and the percentage of nonwhites

Table 3.5
Work-Based Program Experiences

Characteristic	Sex		Race		Total
	M	F	W	NW	
Participation (n = 1,475)	20*	26	24*	17	22
If participated:					
Paid? (n = 307)	67	58	60*	80	63
Average wage (n = 171)	$5.75	$5.57	$5.67	$5.52	$5.75
Average hours/week (n = 283)	17.0	15.9	16.1	17.7	16.5
Strongly disagree/disagree with "Work is unrelated to course..." (n = 298)	56*	76	68	57	67
Agree/strongly agree with "Mentors are supportive and answer questions..." (n = 297)	90	87	89	85	88

Note: Entries are sample percentages except for average wage and hours/week.
*Difference between population groups is statistically significant at the .05 level.

who were paid exceeds the percentage of whites by a large margin. The latter difference was statistically significant. The work-based experiences averaged 16.5 hours per week. Males worked more than females (17 hours to 16 hours) and nonwhites worked more than whites (18 hours to 16 hours, on average), but neither of these were statistically significant.

The work-based program data exhibit a number of differences from last year's data. The overall percentage of students with a work-based program experience, 22 percent, is identical, but in last year's data there were no differences between sex and race groups. In 1997, females and whites were much more likely to participate than males or nonwhites. The share of students who were paid was much smaller this year, 63 percent compared to 73 percent, but for those who did get paid, the average wage was $5.75 compared to $5.28. In the 1996 data, males averaged almost $1 per hour more than females, whereas the difference has narrowed to $.18 in the 1997 data. This occurred mainly through higher wages for females. Hours per week for all groups was lower in 1997 than in 1996.

We asked the students who were participating in work-based experiences two questions to measure their satisfaction with those experiences. The first item dealt with the extent to which the work experience was related to the content of the EFE class that the student was taking.

Approximately two-thirds of the students disagreed or strongly disagreed with the statement that the work experience was "unrelated to their EFE class." The level of disagreement, which in this case is the positive indicator, was much lower for males than females and somewhat lower for nonwhites than whites. The second item asked for agreement with the statement that "workplace mentors are supportive and willing to answer questions." Almost 90 percent of the sample agreed with this statement. The differences between males and females or whites and nonwhites were not significant. The students clearly appreciated supportive mentors in their work-based experiences. This finding differs slightly from last year, when males were far less positive about their worksite mentors.

Postsecondary and Career Plans

The next general topic that we examined in the survey of students was postsecondary and career plans. Table 3.6 presents summary data about postsecondary plans. A surprisingly high proportion of students reported that they planned to pursue an apprenticeship program after high school, over a quarter of the entire sample. It is not clear why such a high percentage of students had this aspiration; apparently there was widespread misunderstanding about what apprenticeships mean and/or how readily accessible they are.

A high percentage of the students indicated that they were planning to attend a postsecondary institution (including community colleges and four-year colleges or universities). All together, 84 percent of the sample indicated that they were planning to attend either right after high school or in the future after a few years of work. Females reported a much higher rate of plans to attend college right after high school, 79 percent to 70 percent. This difference is statistically significant, but it is

Table 3.6
Postsecondary Plans and Relevance of EFE Class

Plan/Relevance	Sex		Race		Work-based program		Total
	M	F	W	NW	Yes	No	
Postsecondary plan							
Apprenticeship program after school?	32*	22	26*	34	31	28	28
Postsecondary college, university (including community college)							
Yes, right away	70*	79	75	71	81*	71	73
Yes, after work	12	9	12	9	9	12	11
Don't know	9	7	8	10	6	9	9
No	9*	5	6	9	3*	8	7
Relevance of EFE class?							
Agree/strongly agree with "EFE class helped me to decide..."	42	43	43	42	45	42	43
Agree/Strongly agree with "EFE class was helpful in choosing program. . ."	46*	52	50	45	52	47	48

Note: Table entries are percentages of the overall sample, except for item nonresponse. Overall sample size is 1,475.
* Difference between population groups is statistically significant at the .05 level.

smaller than the difference in the 1996 data (85 percent versus 67 percent). Furthermore the gender difference in those who are not planning to attend a postsecondary institution or who don't know narrowed. Last year, 20 percent of the males and 7 percent of the females indicated that they did not plan to go on to postsecondary; these shares have changed to 18 percent and 12 percent.

The students' EFE experiences had an impact on their postsecondary plans. Forty-three percent of students reported that they agreed or strongly agreed with the statement that "EFE classes helped me to decide whether or not to attend postsecondary schooling." While this seems like a modest impact, it should be noted that the majority of students reported that they knew that they were college bound prior to their enrollment in EFE classes.

We also asked whether or not EFE classes had been influential in choosing a particular institution or postsecondary program. About half of the respondents indicated agreement with the

statement that "EFE classes had been helpful in choosing a particular college or program." In this case, females were more likely to agree with the statement than males, 52 percent to 46 percent.

Table 3.7 presents data on occupational/career aspirations of the students when they reach 30 years of age. The students were clearly aspiring to white collar/professional positions. Approximately 60 percent of the sample aspired to the following occupations: manager/ administrator, professional, proprietor/owner, or school teacher. Females and minorities, particularly, had set their sights in these directions. Almost half of the females in the sample reported that they would like to be in a professional occupation when they reach 30. Only a quarter

Table 3.7
Career Plans and Relevance of EFE Class

	Sex		Race		Work-based program		
Plan/Relevance	M	F	W	NW	Yes	No	Total
Occupational aspirations at age 30							
Clerical	1	4	3	3	4	2	3
Craftsperson	15	1	9	6	8	8	8
Farmer	3	1	2	0	3	2	2
Manager/administrator	11	8	10	9	10	10	10
Military	3	1	2	3	2	2	2
Operative	4	0	2	2	1	2	2
Professional	26	46	33	42	27	38	35
Proprietor/owner	11	5	9	7	8	8	8
Protective services	7	3	6	4	8	4	5
Sales	3	3	3	5	2	4	3
School teacher	3	15	10	4	16	7	9
Service	1	7	3	5	3	4	4
Technical	10	4	7	7	6	7	7
Not working	1	1	1	1	2	1	1
Relevance of EFE Class							
Agree/strongly agree with "EFE class helped me to decide on job at 30."	43	50	46	45	53*	44	45

Note: Table entries are sample percentages. Sample size for occupational aspiration is 1,358. Sample size for relevance is 1,311. Columns may not add to 100 due to rounding.
* Difference between other population group is statistically significant at the .05 level.

of males shared that aspiration. On the other hand, a quarter of the males aspired to be craftspeople or technical workers, whereas only 5 percent of women reported this aspiration.

As with questions about postsecondary plans, we asked about the influence of EFE on the students' career aspirations. This indicator is displayed in the bottom row of table 3.7. The survey question asked the students to agree or disagree with the statement that the "My participation in this class or other EFE classes helped me to decide what job or career I would like to have when I'm 30." Just under half of the students agreed or strongly agreed with this statement; that is, indicated that their EFE class had a strong influence on their career choice. Females and students in a work-based experience were more likely to agree with the statement than other EFE students.

Current Employment

The last topic covered by the survey was current employment experiences. As table 3.8 indicates, 56 percent of the students indicated that they were currently working for pay apart from any work-based program experience that they were having through EFE. (This was 4 percentage points lower than in the 1996 data.) Whites had a higher employment rate than nonwhites. For those with jobs, the average hours of work per week was around 18, and the average wage was $5.67. Males worked more hours per week than females—18.9 to 17.5—and received higher average wages—$5.87 per hour to $5.45. Students with work-based experiences worked more hours per week than students not participating in work-based experiences, 19.3 to 17.9. Similarly, students with work-based program experiences were also earning higher wages.

We asked the students whether or not they were using the training that they had received through their EFE course in their current job. Approximately half of the students who were working

Table 3.8
Current Employment Characteristics

Characteristic	Sex		Race		Work-based program		Total
	M	F	W	NW	Yes	No	
Currently employed? (n = 1,357)	57	55	57*	51	58	56	56
If employed:							
Apprenticeship (n = 716)	10*	6	8	11	18*	5	8
Average hours/week (n = 693)	18.9*	17.5	17.9	19.0	19.3*	17.9	18.2
Average hourly wage (n = 674)	$5.87*	$5.45	$5.68	$5.67	$5.86	$5.62	$5.67
Use training from EFE class? (n = 729)							
A lot	17	20	18	15	24*	17	18
Some	31	29	28*	40	38*	28	30
Hardly any	22	22	22	23	18	23	22
Never	31	29	32*	22	21*	33	30

Note: Table entries for rows 1-2 and 5-8 are sample percentages.
*Difference between population group is statistically significant at .05 level.

indicated that the skills and training they had received in their EFE class were somewhat useful or useful a lot. The other half reported that they used hardly any of the EFE skills and training or none at all. Nonwhite students and students with work-based experiences were more likely to be using their EFE training in their current part-time employment situation than were whites or students without work-based program experiences.

Trends

It would be incorrect to identify changes over time as trends since it takes at least three points to form a time trend. But we did find the following differences or consistencies between the two years of data:

- Slightly higher reported levels of homework in 1997
- Slightly fewer incidences of tardiness and absences in 1997
- Slightly less reliance on guidance counselors for information about EFE in 1997

- In 1997, the (minority of) students who were relatively dissatisfied with EFE were more likely to be males, which was exactly opposite from 1996 when females were relatively dissatisfied; consistent over the two years, however, was relative dissatisfaction of nonwhites compared to whites.

- The differences in level of satisfaction with EFE between students with and without work-based program experiences was moderated somewhat in 1997 (the overall grade level for class quality decreased slightly for students with work-based experiences).

- In 1997, fewer work-based program experiences were paid; the average pay increased by over 10 percent; and the number of hours per week was reduced.

- Student opinions about work-based program experiences were much higher in 1997; more students agreed that their "work experiences were related to their class" and more students agreed that "mentors are supportive and answer questions."

- In both years, about 85 percent of students planned to attend a postsecondary institution either right after high school or after working for a few years.

- Both years of data showed that more than half of current students aspired to white-collar, professional occupations; a higher percentage of females aspired to professional occupations than males in both years, as well.

- Slightly fewer students were currently employed outside of school in 1997 than in 1996.

- Students who were employed outside of school earned higher wages in 1997.

- Minority students and students with work-based program experiences were more likely to report that the skills learned in EFE were useful in their part-time jobs in both years than were whites and students without work-based experiences.

4. Parents

Parents/guardians are an important stakeholder group in EFE programs and services. To gauge their level of satisfaction with EFE classes, we conducted a brief mail survey of parents. Note that the student and follow-up surveys were administered to the entire universe of existing and completing students, but the parent survey was sent to a random sample of 500 parents/guardians of existing students. We received 160 completed surveys, so the overall completion rate was about 32 percent, which is reasonable for a mail survey.

Topics that we measured included parent involvement in and information about the decision to enroll in an EFE class, knowledge of and opinions about the curriculum and instruction, and general opinions about the EFE consortium.

Involvement in and Information about Enrollment in EFE Class

We asked parents/guardians how much they were involved in their child's decision to enroll in the EFE class. We allowed one of four responses: a great deal, some, little, and none. For those parents who responded that they had at least a little involvement, we asked what sources of information did they use, how adequate was the information, and what additional information would have been helpful. Table 4.1 provides the frequency distributions for these questions.

About 70 percent of the respondents indicated that they had had some involvement in their student's decision to enroll. However, most of the respondents indicated that their involvement could be characterized as "little" or "some." Only about one in nine parents indicated that they had had "a great deal" of involvement. The reported level of involvement in the enrollment decision

lessened between 1996, when about 80 percent of the respondents indicated some involvement, and 1997.

Table 4.1
Parent Involvement in and Information about Enrollment Decision

Involvement/Information	Percentage
How much involvement did you have? (n = 157)	
A great deal	11.5
Some	38.2
Little	18.5
None	31.8
Sources of information used (n = 109)	
Student's knowledge/opinion of class/teacher	56.9
Own knowledge of class/teacher	23.9
High school handbook	32.1
Written information (brochure)	19.3
Guidance counselor	28.4
Adequacy of information (n = 103)	
Very adequate	27.2
Adequate	67.0
Inadequate	5.8
What additional information would have been helpful? (n = 137)	
Percentage of students who took this class and went on to college	32.7
Career ladders	49.1
Starting salaries in occupation	33.3
Description of course content	53.5

Note: Percentages for level of involvement and adequacy of information may not add to 100.0 due to rounding.

The sources of information that parents used most were what their child told them about the class or teacher (57 percent of parents) and high school handbooks (32 percent). The other sources of information were each used by 20-30 percent of parents who got involved. These included the parents' own knowledge of the class or teacher, written information such as a brochure, and information from guidance counselors. The reported usage of high school handbooks doubled between last year's survey and this survey.

The parents/guardians who responded to the survey felt that the information that they had consulted was adequate or very adequate. Sixty-seven percent of the parents felt it was adequate, 27 percent felt it was very adequate, and only six percent felt it was inadequate. We asked what additional information would have been helpful to them in the enrollment decision. The most frequent responses were "description of course content" and "career ladders in the occupation." Around half of parents/guardians who were involved in their student's enrollment decision would

have liked additional information about these matters. Around a third wanted more information about starting salaries in the occupation and would have liked information on the percentage of students who enrolled in this class and went on to college.

Knowledge of and Opinions about Their Student's EFE Class

Table 4.2 provides data concerning parents' knowledge of and opinions about their student's EFE class. About three-quarters of the parents/guardians reported that they had met the teacher. Just over ten percent had actually observed a class period, though. Most parents (about 75 percent) felt that they had some information about the instructional content in the EFE class. (This was a decrease from the 1996 data, in which 85 percent of respondents indicated that they some information.) They did not claim to have a great deal of knowledge, however. The parents indicated that they had "only a

Table 4.2
Parent Knowledge of/Opinions about Instruction in Class

Characteristic/Opinion	Percentage	Percentage with don't know response
Met teacher (n = 157)	73.0	--
Observed class period (n = 158)	11.4	--
Amount of information about instructional content (n = 158)		
A great deal	11.4	--
Some	42.4	--
Only a little	22.2	--
None	24.1	--
Opinion about amount of information given about student expectations (n = 152)		
Too much	0.0	--
Just right	53.9	--
Not enough	21.7	--
No information given	24.3	--
Approve/greatly approve of: (n = 118)		
Pace of instruction	64.4	11.0
Equipment/materials	71.2	16.1
Textbook	50.9	19.8
Class size	62.7	10.2
Subject matter	84.7	3.4
Amount of time on projects	73.5	7.7
Chance to learn employability skills	75.5	5.9
Student expectations	65.8	6.0

Note: Percentages may not add to 100.0 due to rounding. -- denotes not applicable.

little" or "some" information most of the time. Only one out of seven individuals who said that they knew something about the instructional content of the class indicated that they knew "a great deal."

We asked parents/guardians for their opinions about the amount of information they had been given about student expectations in the EFE class. Over 40 percent of the parents indicated that they had no information or not enough information about what was expected of their students. All of the other parents reported that the amount of information they had been given about student expectations was "just right." These data closely parallel the data from last year's survey of parents/guardians.

The bottom panel of the table provides indicators about how parents perceived the quality of various characteristics of the class. The respondents were asked how well they approved of eight class characteristics: instruction, equipment/materials, textbook, class size, subject matter, amount of time spent on projects, chance to learn employability skills, and student expectations. The data show that the parents were generally quite pleased.[5] Over 70 percent of the parents approved of or greatly approved of the EFE class equipment and materials, content (subject matter), amount of time spent on projects, and the chance to learn employability skills. The approval ratings for the class textbook appears low, but a significant share (20 percent) of parents indicated that they did not know about them. If we adjust the data to account for the "don't know's," then the approval ratings would be much higher and would be consistent with the other class characteristics. The lowest rated class characteristics were pace of instruction, class size, and student expectations. However, even for these characteristics, about two-thirds of parents approved or greatly approved of them.

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[5]The data from the 1997 survey show lower levels of satisfaction than the data from the 1996 survey. However, the comparison may not be appropriate. All of the items in the 1996 survey were worded in a positive manner. In 1997, some of the items were rephrased in a negative manner. Consequently, the 1997 items are more valid.

This section of the questionnaire also asked parents open-ended questions in which they were to list three positive aspects about their students' class and three recommendations for improvement. Table 4.3 presents the responses to this question. The positive aspects that were mentioned most often included "learned useful skills," "hands-on instruction," "introduced student to real world," and "(name) of a specific teacher or EFE staff person." Note that among the recommendations for improvement, the second most often mentioned comment was "None (everything was positive)." Along with that positive result, there were a few complaints. A total of 34 parents mentioned some problem with logistical arrangements such as transportation or communication with parents; 23 mentioned a specific teacher or staff person; and 18 parents/guardians were concerned about the pace or relevance of the class. These comments were similar to those received in the 1996 survey, although there was more emphasis in the positive comments this year on self-esteem or affective gains for students and on specific workplace know-how skills. On the negative side, there were more comments about specific staff members.

Table 4.3
Positive Aspects and Recommendations for Improvement from Parents

Aspect	Number of times mentioned
Positive aspects	
Introduction to work/real world	39
Helpful for postsecondary plans	7
Hands-on instruction	42
Learn useful skills	56
Supplemental opportunities	16
Specific teacher/staff person	33
Enjoyed class/learned a lot	21
Individual attention	17
Facilities/technology	7
Affective gains	25
Workplace know-how skills	34
Other	8
Recommendations for improvement	
None (everything was positive)	33
Pace or relevance	18
Specific teacher/staff person	23
Logistics, organization (e.g. communication w/parents, transportation)	34
Not enough individual attention	4
Facilities	2
Worksite problems	1
Classroom management	9
Other	25

Opinions about EFE

The last two questions in the parent survey asked for opinions about the Education for Employment consortium. Data from these questions are displayed in table 4.4. First, parents were asked how well they approved of the way EFE prepares students for employment, college, learning technical skills, learning academic skills, work environments, and productive careers. For each of these items, around 8 - 10 percent of the respondents were noncommittal; they indicated that they didn't know. However, by the remainder of the respondents, EFE was viewed favorably. Around three-quarters (or about 80 to 85 percent of the respondents who gave an opinion) approved or greatly approved of EFE's preparation of students for these outcomes. As might be expected, the lowest ratings of approval were for learning academic skills. The highest rating was for learning technical skills. These positive comments about EFE are in line with the responses received in the 1996 survey.

Table 4.4
Parent Opinions about EFE

Opinion	Percentage	Percentage with don't know responses
Approve/greatly approve of way EFE prepares students for:		
Employment (n = 149)	79.9	8.1
College (n = 146)	75.4	13.0
Learning technical skills (n =147)	80.3	8.2
Learning academic skills (n =146)	69.9	7.5
Work environments (n = 147)	77.6	9.5
Productive careers (n = 146)	76.1	8.9
Comments about EFE	Number of times mentioned	
Very positive	41	
More information needed for parents	4	
Counselors were a problem	2	
More programs suggested/needed	10	
Negative comment about specific individual	3	
Not enough information to comment	3	
Transportation problems	6	
Articulation w/college	3	
Career awareness	13	
Reach more students	6	
Other	2	

Finally, the survey asked parents if they had any comment for EFE administrators to consider. Virtually all of these comments were positive. Some of the

comments even indicated that EFE needs to provide more programs or more publicity so that it can reach more students.

Summary

All in all, from the two years of parent surveys, we learned the following:

- The respondents were not particularly active participants in the decision to enroll in the EFE class. In 1996, over 20 percent indicated that they had no involvement, and in 1997, this percentage rose to about 32 percent.

- Parent/guardians who were involved mostly relied on student information. In 1997, parent use of high school handbooks and guidance counselor information increased significantly. In both years, parents felt that the information they received was adequate or very adequate.

- Two areas in which the parents/guardians would have liked more information were descriptive content of the course and potential career ladders.

- Many of the parents/guardians had met their student's teacher, but few had observed a class period.

- Parents/guardians approved or greatly approved of all aspects of the EFE class. They were less knowledgeable about textbooks and equipment/materials, however.

- Parents/guardians particularly liked the EFE classes for the technical skills that were being learned and for introducing their students to the work world and real-life experiences.

5. Employer Involvement with EFE

The telephone survey of employers that was conducted in Summer 1997 collected information from respondents at 27 establishments that had student interns during the 1996-97 school year, and 51 establishments that had no internships. In this chapter, we refer to the former as "participants" and the latter as "nonparticipants." First, we examine establishment and workforce characteristics of the two populations.

Characteristics of Participant and Nonparticipant Establishments

Table 5.1 displays various characteristics of participant and nonparticipant establishments. Statistical tests of the differences in the frequency distributions suggest that there were few discernible differences. The only characteristic for which there was a statistically significant difference was whether or not the respondent's establishment was the sole facility of a corporation or one of a number of facilities within a larger corporation. Seventy percent of the participant establishments were the sole facility whereas only 44 percent of the nonparticipant establishments were the sole facility. Interestingly, the 1996 survey of employers found just the opposite; nonparticipants were more likely to be single facility corporations.

Aside from that characteristic, participants were not statistically distinguishable from nonparticipants. The distributions of establishments by major industry group were virtually identical. About one-third of the establishments in both groups were in manufacturing and over one-half were in the services sector. A large majority of both were private, for-profit corporations—85 percent of participants and 81 percent of nonparticipants. Participant establishments had been in

Table 5.1
Characteristics of Establishments, by Participation Status

Characteristic	Participants	Nonparticipants	p-value
Industry			.99
Manufacturing	33.3	33.3	
Retail Trade	7.4	5.9	
Service	55.6	56.9	
Government	3.7	3.9	
Sole facility in corporation?	70.4*	43.8	.03
Years establishment has been in business	32.1 years	30.2 years	.75
Establishment type			.87
Private, for-profit	85.2	81.3	
Private, nonprofit	11.1	14.9	
Government	3.7	3.9	
Trends in profit			.40
Increasing	58.3	69.0	
Remaining the same	41.7	26.2	
Decreasing	0.0	4.8	

Notes: Table entries are percentages, except as noted. Columns may not add to 100.0 due to rounding. P-value from t-tests for differences in means (assuming equal variances) and χ^2 tests for discrete frequencies. Question on profit trends does not specify time period. Sample size is 27 participants and 51 nonparticipants.

* Difference between participants and nonparticipants is statistically significant at the .05 level.

business an average of 32 years and nonparticipants had been in business for about 30 years. Over 95 percent of the for-profit establishments in both groups indicated that their profits were remaining constant or increasing.

Summary information from the data that were collected about the workforces of establishments is displayed in table 5.2 As with establishment characteristics, there appear to be few differences between participant establishments and nonparticipants. In fact, none of the differences were statistically significant. The average employment size of the establishments was about 60 for both. Participants reported that, on average, just under 85 percent of their workers were full-time, permanent workers and that 15 percent were part-time, permanent workers. These percentages for nonparticipants were about 75 percent and 25 percent for full-time and part-time workers, respectively. (Very few of the respondents reported hiring or subcontracting for temporary workers, so the overall average workforce percentage was about 1.) Among occupations, participants and

Table 5.2
Characteristics of Workers, by Participation Status

Characteristic	Participants	Nonparticipants	p-value
Employment size, average	60.9 workers	58.4 workers	.93
Employment status			
Full-time, permanent	83.1	73.6	.14
Part-time, permanent	15.5	25.1	.14
Temporary	1.4	1.3	.85
Occupation			
Managers, professionals, and technical	32.5	34.3	.82
Sales	13.7	10.2	.53
Service workers and clerical	24.1	36.1	.13
Production workers	29.7	19.5	.25
Yearly turnover rate among nonmanagerial workers	19.3	23.2	.80
Trend in employment			
Increasing	40.7	41.7	.92
Remained the same	55.6	56.3	
Decreasing	3.7	2.1	
Trend in skill level required for entry-level work			.72
Increased a lot	18.5	22.0	
Increased somewhat	51.9	48.0	
Remained the same	29.6	26.0	
Decreased somewhat	0.0	4.0	
Decreased a lot	0.0	0.0	
Types of training offered			
Registered apprenticeships	19.2	20.4	.91
External training	59.3	46.9	.31
In-house training	81.5	87.8	.46
Customized training	14.8	10.2	.56
Remedial training	7.4	2.1	.26
Tuition reimbursement	44.4	33.3	.35
Human resource practice			
Job rotation	29.6	32.0	.83
Self-managed teams	37.0	50.0	.28
Employee problem-solving teams	37.0	44.0	.56
Total quality management	40.7	42.0	.92
ESOP/profit-sharing plan	40.7	38.8	.87

Notes: Table entries are percentages, except as noted. Columns for employment status, occupation, employment trend, and skill-level trend may not add to 100.0 due to rounding. P-value from t-tests for differences in means (assuming equal variances) and χ^2 tests for discrete frequencies. Sample size is 27 participants and 51 nonparticipants.

nonparticipants had, on average, about the same percentages of managers, professionals, and technical workers and sales workers. However, participant establishments had a higher percentage of production workers and a lower percentage of service and clerical workers than nonparticipants.

In the 1996 data, the average employment size of participants (142 workers) was almost twice as large as the average size of nonparticipants (73). The employment status and occupational distributions for 1997 are similar to those for 1996, however.

Other characteristics shown in the table include estimated annual turnover rates, which were about 20 percent for both participants and nonparticipants, and trends in employment size. About 40 percent of establishments indicated that their employment was increasing and 55 percent indicated that it was remaining about the same.

Only two establishments in the entire sample reported that entry-level skills had decreased over time. Seventy percent of both participant and nonparticipant respondents indicated that entry-level skills had either increased somewhat or increased a lot. The remaining thirty percent indicated that they had stayed the same. The predominant training modality was in-house training—between 80 to 90 percent of establishments indicated that they provided such training. About 60 percent of participants and half of nonparticipants reported that they engaged in training provided by external parties, and about 40 percent of participants and one-third of nonparticipants had tuition reimbursement policies. One-fifth of the firms had registered apprenticeships and a handful of establishments contracted for customized training or offered remedial basic skills training.

We surveyed the employers about whether their establishments had engaged in a number of human resource practices associated with "high performance" workplaces. Approximately 30-50 percent of establishments indicated that they used job rotation, self-managed teams, employee problem-solving teams, total quality management, or profit-sharing. (Not all of the establishments engaged in all five of the practices; rather almost all establishments were engaged in one or two of them.) There was no statistically significant differences between participants and nonparticipants

along this dimension of work. The 1996 survey suggested substantial differences between participants and nonparticipants in terms of training and human resource practices. The earlier survey showed that participants tended to offer more training and had significantly higher incidences of external training and tuition reimbursement plans. Furthermore, the 1996 data showed that participant firms were more likely to have engaged in "high performance" workplace human resource practices such as job rotation or self-managed teams. The 1997 data, to reiterate, exhibited few differences between participants and nonparticipants in these characteristics.

Table 5.3 provides data from participants about why they chose to offer student internships through EFE. One question asked for all factors that were important considerations in the decision to participate, and a separate question asked for the most important factor. Virtually all of the respondents indicated that they were motivated by a "desire to help improve the public education system," and because it was an "opportunity to contribute to the local community." Between 40 percent and 60 percent of the participants cited the following reasons: "Opportunity to test potential

Table 5.3
Self-Reported Importance of Factors in Participation Decision

Factor	Percentage of participants for which factor was important	Percentage of participants for which factor was most important
Local labor shortage	37.0	0.0
Opportunity to test potential workers	59.3	11.5
Good way to hire part-time workers	44.4	3.8
Desire to help improve the public education system	96.4	23.1
Encouragement from industry/other employers	28.6	0.0
Good way to reduce expenditures on benefits	3.8	0.0
Opportunity to contribute to local community	100.0	30.8
Gain access to pre-screened applicants	48.1	3.8
Increased training is necessary in industry	66.7	7.7
Access to a pool of qualified workers	44.4	3.8

Note: Sample size is 28; 15.4 percent of participants could not declare single most important factor.

workers," "Good way to hire part-time workers," "Gain access to pre-screened applicants," "Increased training is necessary in industry," and "Gain access to a pool of qualified workers." A slightly smaller percentage—approximately one-third—indicated, "Local labor shortages," and "Encouragement from industry/employer groups" were important factors. Finally, one participant acknowledged that student interns were a "Good way to reduce expenditures on benefits." The distribution of answers to the question about the single most important factor is similar to the distribution for all factors; over half of the respondents indicated that it was an altruistic motive of either improving public education or contributing to the local community. All in all, when asked directly, employers seem to suggest overwhelmingly that altruistic motives were the key determinants of their participation. This result held true in the 1996 data as well.

Table 5.4 provides summary information about student internship experiences. On average, participants had 2 interns during the previous academic year. The mean length was 24 weeks, although almost all of the respondents indicated that the internships lasted either a semester or full year, i.e. 18 or 36 weeks. On average, the interns worked about 20 hours per week. A little over half of the internships were paid positions, and for them, the average hourly wage was $6.79.

Student internships were initiated by phone contact from an educator in a little under half of the cases, which was by far the most common means of initiation. A quarter of the time, the student initiated the contact by approaching an employer directly. Other types of outreach, such as another employer, current employee, and letters from an educator, were reported to have occurred only a small percentage of the time.

All but one of the establishments reported that they had assigned workplace mentors to their student interns. About two-thirds of the respondents indicated that student internships involved

Table 5.4
Elements of Student Internships

Element	Percent/Mean Number
Number of high school interns in 1996-97, mean (n=19)	2.1 students
How establishment learned about internship opportunities (n=24)	
Phone call from educator	45.8
Letter from educator	0.0
Student approached	25.0
Current employee	4.2
Another employer	12.5
Trade/employer association	0.0
Newspaper article	0.0
Other	29.2
Don't know	8.3
Elements of internship (n=26)	
Written agreement	69.2
Workplace mentor	96.2
Job rotation	50.0
Employer advises school on curriculum content	69.2
Mentor training	28.0
Student learning is documented/assessed	72.0
Intern screening (n=26)	
Interview the student in person or over telephone	92.3
Administer a paper-and-pencil competency test	3.8
Get references	80.0
Request transcripts	26.9
Number of weeks, mean (n=21)	23.8
Average hours per week (n=25)	20.0
Average hours needed to learn job (n=12)	65.0 hours
Internship is paid position (n=24)	54.2
If paid, mean hourly wage (n=13)	$6.79

written agreements, had formal documentation and assessment of student learning, and provided employers the opportunity to advise school on the learning content. The internship involved job rotation at half of the establishments, and only about a quarter of establishments provided training to workplace mentors. The majority of employers indicated that they interviewed students in person or over the telephone prior to offering them internships and they got references from the students. A little over a quarter of the employers requested formal transcripts. The percentage of establishments with formal written agreements and that document and assess student learning was lower in 1997 than in 1996, when these elements were reported by 90 percent of the participants. On the other hand, a significantly larger percentage of participants in 1997 advised schools on curriculum content. The screening mechanisms were similar for both years.

Student learning is obviously an important outcome of internships. But another outcome of interest is how comparable student interns are with typical entry-level employees in terms of work performance. In other words, were student interns productive on the job? Data from the employer

survey indicated clearly that the answer was yes. Over two-thirds of the respondents (68.0 percent) indicated that they had made offers of permanent employment to some or all of their student interns. Over 90 percent indicated the work that was accomplished by the students would either have been reassigned to existing employees (67 percent) or additional staff would have been hired (25 percent) if the establishments had not had the interns. For those respondents who would have reassigned the work or hired additional staff, the average wage paid to an entry-level person was $6.75 per hour.

Table 5.5
Comparison of Work Performance Attributes between Student Interns and Entry-Level Workers

Attribute	Percentage of response indicating interns' performance relative to entry-level workers		
	Better	The Same	Not as Good
Attendance	18	63	18
Reliability	14	68	18
Attitude	50	41	9
Productivity	23	50	27
Training required to learn job	25	50	25
Communication skills	10	52	38
Writing skills	21	63	16
Math skills	42	47	11
Technical skills	45	25	30

Note: Sample size is 27. Rows may not add to 100 due to rounding.

The data in table 5.5 show how student interns compared to entry-level workers on nine dimensions of skills and attitude. Note that almost half of the respondents indicated that students interns were "better than" entry-level workers in "attitude," "math skills," and "technical skills." Over 80 percent of respondents reported that students were "better than" or "same as" entry-level workers in "attendance," "reliability," "attitude," "writing skills," and "math skills." The areas where students were relatively weakest in comparison to entry-level workers were "productivity," "communication skills," and "technical skills," but even for these skill areas, the majority of employers judged students to be at least as good as entry-level workers. The data in table 5.5 are quite similar to the comparisons of student interns to entry-level workers provided by respondents to the 1996 employer survey. Both

surveys showed that communication skills of interns were the lowest rated characteristic by a considerable margin. Compared to the 1996 survey, this year's survey rated students relatively lower on attendance and reliability, and relatively higher on attitude, math skills, and technical skills.

Data concerning employer interactions with the educational sector are shown in table 5.6. Over half of the employers had heard of EFE, and among those that had heard of the consortium, over 60 percent participated. About one-fifth of the nonparticipants had been approached and asked to participate in EFE or other educational programs. About half of the nonparticipants, whether they had been approached or not, indicated that they would consider participating in EFE. In the 1996 survey, two-thirds indicated that they would consider participation. Thus, there seems to be a large pool of firms that would be potential participants, if asked.

Table 5.6
Employer Interactions with Schools

Interaction	Percentage
Heard of EFE? (n = 78)	54
If yes, participate in EFE? (n = 40)	63
If don't participate, ever approached and asked to participate? (n = 53)	19
If yes, still considering? (n = 5)	60
If don't participate, would consider it (n = 52)	48
Among participants, rated following interaction as good or excellent:	
Overall coordination (n = 26)	62
Response to problems (n = 24)	54
Communication channels (n = 25)	68
Quality of students (n = 26)	73
Program flexibility (n = 25)	60
Classroom support (n = 25)	64

For establishments that had participated, around 60 percent indicated that the following aspects had been good or excellent: Overall coordination, response to problems, communication channels, quality of students, program flexibility, and classroom support. These percentages are lower than those reported in the 1996 survey suggesting that EFE should monitor its interaction with employers to make sure that this trend does not continue.

The final information gathered in the survey dealt with the concerns about participating in student internships. As with an earlier data item, one question asked respondents to list all their concerns and a second question asked them to identify their most important concern. Table 5.7 shows that about one-third of participants were concerned that students might leave after their internship, students lack basic skills, and students are not always available when they're needed in the workplace. Around 20 percent of participants expressed concerns about lost productivity of trainers, uncertain economic climate, and student unreliability and immaturity. The other concerns listed in the table were not mentioned or mentioned by only one or two participants.

Table 5.7
Employer Concerns about Participating in Internship Programs

	Participants		Nonparticipants	
Concern	Percentage responding as concern	Percentage most important concern	Percentage responding as concern	Percentage most important concern
Resistance among employees	0	0	10	2
Lost productivity of workers who train and supervise students	19*	16	43	20
Students might leave after training is completed	31	11	29	0
Opposition from unions	4	0	8	0
Uncertain economic climate	19	11	20	0
Students lack basic skills	27*	0	53	11
Violation of child labor or OSHA regulations	8*	0	49	4
Students are not always available when needed	32*	26	57	18
Students are unreliable and immature	23	16	43	11
Student wages are too costly	0	0	10	0
Problems working with schools	0*	0	12	0
Liabilities from having minors in work place	12*	0	45	16

Note: Sample size for participants is 27; for nonparticipants is 51. Twenty-one percent of participants and 17 percent of nonparticipants could not indicate most important concern. Frequency distributions for "most important concern" are significantly different from each other (p-value = .05).
* Difference between participants and nonparticipants is significant at the .05 level.

As might be expected, nonparticipants had more concerns than did the participants. Furthermore, their concerns were slightly different. Around half of the nonparticipants noted concerns about violations of child labor or OSHA regulations, students not always being available when they're needed in the workplace, students lack basic skills, lost productivity of trainers, student unreliability and immaturity, and liabilities from having minors in the workplace. About a quarter of the nonparticipants were concerned that students might leave after their internship and uncertain economic climate.

Two main differences existed between participants' and nonparticipants' concerns. First, the latter were far more numerous. With only two minor exceptions, every item in the table had a larger percentage of nonparticipants who reported the item as a concern than participants. Second the nonparticipants were far more concerned about liability issues. Only about a tenth of the participants mentioned violation of child labor or OSHA regulations or liabilities from having minors in the workplace as concerns. Nearly half of the nonparticipants did. Furthermore, none of the participants identified either of these concerns as their most important concern, whereas 20 percent of the nonparticipants mentioned one of the liability issues as their most important concern.

The array of concerns expressed by employers in 1997 resemble closely those given a year earlier. A couple of significant differences do stand out. The percentage of nonparticipants with a concern about students leaving after their training is much smaller in 1997, 29 percent compared to 63 percent, and the percentages of both participants and nonparticipants who expressed concerns about student quality, such as not available when needed or unreliable or immature, declined somewhat between 1996 and 1997.

Summary

The 1997 employer survey resulted in the following findings:

- The establishment and workforce characteristics of participants and nonparticipants were similar. In other words, the variables that we measured were not good predictors of which establishments were likely to participate in student internships.

- The most important self-reported motives for participating with EFE were public-mindedness or altruism. Specifically, there was a desire to help improve the public education system and an opportunity to contribute to the local community.

- Virtually all internships were characterized by a workplace mentor and involved a student in-person or telephone screening interview. About three-quarters of the internships included a written agreement, documentation and assessment of student learning, employer input to the school about curriculum content, and involved having students supply references.

- Student interns were clearly productive in the workplace—they were assessed by employers as being equal to or better than entry-level, permanent employees along many dimensions of job performance.

- About two-thirds of employers who participated in student internship programs were satisfied with their interactions with schools and students, but this is a decline in level of satisfaction from 1996.

- The biggest concerns about internships held by participant establishments concern student quality, such as lacking basic skills, not always being available when needed, and unreliability or immaturity. Nonparticipating establishments had many other concerns, but they centered around liability issues.

6. EFE Completers

In addition to current students, parents of current students, and employers, this assessment also included a survey of former EFE students. The sampling frame for this survey was students who were classified as seniors in 1995/96 and who were enrolled in an EFE class at the end of that school year. These students were surveyed by telephone in May - July 1997, which was a little over a year after they graduated from high school. As noted in a table below, under 1 percent of the students did not graduate in 1996, and reported that they graduated in 1997 (only 2 students). The precise size of the total sample was uncertain, but we presume it to be around 1000 students. Responses were received from 322 students. This response rate (32 percent) is significantly lower than what we achieved in 1996 (approximately 47 percent). Reasons for the reduction are unclear because the survey procedures that were followed were identical. However, interviewers felt that they encountered more answering machines and caller identification screening in 1997, which may have reduced the response somewhat. The lower response rate must be factored in to any analysis of differences between 1996 and 1997 data.

Note that the data from EFE completers is different from what the population for the student survey would look like if we interviewed them one year later (for seniors) or two years later (for juniors). First of all, some of the current students may drop out and not graduate. Second, some of the juniors may not continue with an EFE class in grade 12. Finally, we may have response bias for the follow-up survey if there are systematic differences in the characteristics of respondents and nonrespondents.

The main subjects of the survey included the postsecondary experiences of the students, the current employment status of the students, and high school experiences and opinions about EFE classes as recalled by the students. The analyses presented in this chapter examine these subjects for all respondents, and by sex, race, postsecondary attendance status, and whether or not the students participated in a work-based program while in EFE.

Postsecondary Experiences

Table 6.1 summarizes the postsecondary experience data for the EFE completers. The respondents were almost perfectly divided among three groups: attending a four-year institution, attending a two-year institution, or not attending school (including just graduated from high school). The differences in the postsecondary attendance rates between males and females and between those who participated in work-based program experiences and those who didn't were statistically significant. Almost 40 percent of males were not attending school, whereas only a quarter of females were not attending. About 34 percent of students who had not participated in a work site experience were not attending a postsecondary school, whereas only 27 percent of those who had participated in a work site experience were not pursuing a postsecondary program. The overall rates of postsecondary attendance reported in table 6.1 are quite similar to those from last year. However, the gap between males' and females' attendance rates got significantly wider. The military was chosen by a smaller percentage of EFE completers this year than last. In 1996, full-time military service was reported by about 6 percent of the respondents. In 1997, this percentage dropped to just over 2 percent. (Note it could be the case that we had more difficulty getting in touch with military members this year relative to last.)

Table 6.1
Postsecondary Experiences of EFE Completers

Characteristic	Sex		Race		Work-based program		Total
	M	F	W	NW	Y	N	
Postsecondary status							
Not attending school	39.2*	25.3	32.3	35.0	27.3*	34.0	32.6
-- Full time active duty military	4.2	0.0	2.2	2.6	0.0	3.1	2.2
Just completed high school	1.2	0.0	0.0	5.0	0.9	0.5	0.6
2 year institution	30.7	37.3	33.7	35.0	39.1	30.3	33.9
4 year institution	28.9	37.3	34.1	25.0	32.7	35.1	32.9
Field/program for those in 2 or 4 year postsecondary	3.0	3.6	2.7	8.3	3.8	3.3	3.3
Accounting/finance	22.2	15.3	19.9	8.3	17.7	17.9	18.6
Business related	3.0	2.7	2.2	8.3	1.3	4.1	1.9
Communications	1.0	0.9	0.5	4.2	1.3	0.0	1.0
Computers	0.0	0.9	0.5	0.0	1.3	0.0	0.5
Cosmetology	0.0	3.6	1.6	4.2	1.3	1.6	1.9
Criminal justice	7.0	20.7	14.5	12.5	22.8	9.8	14.3
Education	9.1	2.7	5.4	8.3	6.3	4.9	5.7
Engineering	13.1	8.1	10.2	12.5	2.5	16.3	10.5
Graphic/fine arts	2.0	2.7	1.6	8.3	0.0	3.2	2.4
Marketing	1.0	15.3	8.1	12.5	10.1	8.1	8.6
Medical	1.0	9.0	1.1	0.0	0.0	1.6	1.0
Agriculture	5.1	8.1	5.9	12.5	6.3	7.3	6.7
Liberal arts	14.1	0.9	8.1	0.0	8.9	6.5	7.1
Trade & industrial	3.0	0.9	2.2	0.0	1.3	2.4	1.9
Travel & tourism	15.2	12.6	15.6	0.0	15.2	13.0	13.8
Undecided							
Training related to named field							
A lot	50.0	35.9	41.4	50.0	47.4	38.3	42.3
Some	21.1	26.4	24.7	18.2	21.1	26.1	24.0
Hardly any	10.0	17.0	14.4	9.1	13.2	14.8	13.8
None	18.9	20.8	19.5	22.7	18.4	20.9	19.9
Degree working on							
Associate's	22.5	15.3	16.2	37.5	19.0	17.1	18.7
Bachelor's	54.1	60.4	57.8	54.2	55.7	58.5	57.4
Other/none/don't know	23.5	24.3	26.0	18.3	25.3	24.4	23.9
Sample Size	169	153	282	40	112	192	322

Note: Table entries are sample percentages. Full-time active duty military is a subset of not attending school. Columns may not add to 100.0 due to rounding.

* Difference between population groups is statistically significant at the .05 level.

If we compare the postsecondary attendance plans of the current EFE students with the actual postsecondary attendance rates of EFE completers, we find that the latter are slightly lower than the former. In table 3.6, we reported that roughly three-quarters of current students planned to attend

a postsecondary institution right after high school. Table 6.1 shows that about two-thirds are attending. The actual rates in this table are lower than the planned rate given in table 3.6 for all population groups, but the greatest discrepancies are for males, minority students, and students with work-based program experiences. Seventy percent of the male current students reported planning to go on to postsecondary schooling right after graduation, but only 60 percent of male students in the follow-up survey were in school. Almost exactly the same situation holds for minority students—71 percent of current students reported planning to go and 60 percent of follow-up survey students were in school. Finally, 81 percent of current students with work-based program experiences reported planning to go to postsecondary schooling immediately, but 72 percent of follow-up survey students with work-based program experiences while in EFE were going to school. In the 1996 data, the largest discrepancies between planned postsecondary attendance immediately after high school and actual postsecondary attendance were for females and nonwhites.

The other items in the table concern the postsecondary experiences of the EFE completers who reported that they were attending a two- or four-year institution. About 15 percent of those students reported that they were undecided about a major or program. For those who named a major or program field, business-related had the highest percentage of students—around 19 percent. Other fields with more than 10 percent of the students were education and graphic/fine arts. The percentage distribution of students across major fields was quite different from the distribution in the 1996 data. The shares of students in business-related programs and who were undecided about a program or field were about the same. However, decreases in computer-related, criminal justice, marketing, and medical-related fields occurred. Offsetting these decreases were substantial increases in education, graphic/fine arts, liberal arts, and trade & industrial programs.

Males were much more likely to be in business-related, engineering, graphic/fine arts, and trade & industrial programs/majors than were females. Conversely, females were more likely to be in education and health-related fields. Minority students were more likely to be in communications, computer-related, marketing, medical-related, and liberal arts fields than whites, but much less likely to be in business-related and trade & industrial fields. Students with work-based program experience were more likely to be in education (presumably reflecting the teacher externship program) and were less likely to be in graphic/fine arts.

Attention is often focused on the extent to which career and technical education students pursue majors or programs in postsecondary schooling that are related to their courses in high school. About two-thirds of the survey respondents who were in postsecondary programs and who had decided upon a program indicated that it was related to their EFE class "a lot" or "somewhat." Training-relatedness was higher for males than for females—71 percent to 62 percent—but there were no other significant differences among the population groups. Last year's data had a large racial difference; minority students had much lower levels of training-relatedness of their major filed/program than whites. The situation has disappeared in this year's data.

About a fifth of the students in a postsecondary institution reported that they were pursuing an associate's degree. More than twice as many nonwhite students reported pursuing an associate's degree as whites. About 60 percent, with almost no variation across the groups, were pursuing a bachelor's degree. A quarter of the students were pursuing other degrees or were not sure about what degree they were pursuing. The degree aspirations in the 1996 data were slightly different. About 60 percent of the students were pursuing a bachelor's degree in both years, but a reduction in the percentage of students working on an associate's degree has occurred.

Employment Status

Much of the survey asked completers about their current employment status. Note that these data represent an amalgam of part-time work experiences of students who might be pursuing summer school, summer jobs for students who are pursuing postsecondary education, and full-time or part-time employment of students who are not attending postsecondary institutions. All together, table 6.2 shows that about 85 percent of the survey respondents indicated that they were currently working

Table 6.2
Employment and Unemployment Status of EFE Completers

	Sex		Race		Work-based program		Postsecondary			
Characteristic	M	F	W	NW	Y	N	2-yr	4-yr	No	Total
Employment rate (n = 303)	84.5	85.1	86.1	75.7	88.9	83.7	81.2	88.3	84.9	84.8
If employed:										
Usual hours/week (n=244)	37.7*	31.6	35.3*	29.7	35.5	34.3	32.8	32.9	38.8*	34.7
Hourly wage (n=207)	$7.16*	$6.51	$6.90	$6.42	$7.24*	$6.59	$6.94	$6.41*	$7.36*	$6.85
EFE training-relatedness (n=242)										
A lot	23	24	23	29	33	18	32	19	19	24
Some	19	22	21	13	20	20	12	32	15	20
Hardly any	22	15	18	29	17	20	15	19	22	19
None	36	39	39	29	31	42	41	30	43	38
Unemployment rate (n = 303)	10.9	10.6	9.8	17.6	8.6	11.5	12.0	6.2	14.0	10.8

Note: Table entries, except where noted, are sample percentages. Columns for training-relatedness may not add to 100 due to rounding.
* Difference between population groups is statistically significant at the .05 level.

for pay. This rate is 5 percentage points lower than the 1996 data. The employment rates of whites, students who participated in a work-based program, and students attending a 4-year postsecondary institution were significantly higher than minorities, students who did not participate in a work-based program, and individuals who were attending a two-year institution or were not attending a postsecondary institution. Almost 25 percent of minorities were not working.

The average work week for employed individuals was 34.7 hours. It was almost 40 hours per week for respondents who did not go on to college, which was almost six hours more per week, on average, than for individuals who did go on to postsecondary education. Males also averaged more hours per week than females and whites averages more than nonwhites.

The average hourly wage in the survey was about $6.85. The average was almost $1.00 higher for individuals not in school than for 4-year college/university attendees, was $.65 per hour higher for males than for females, and was $.65 per hour higher for individuals with work-based experiences than for other EFE completers. The reported wage rates were about $.25 per hour higher than last year (about 4 percent). Substantially higher wages were reported in 1997 by females and students attending 2-year postsecondary institutions than in 1996. Students who did not go on to postsecondary education actually had lower average wages, however.

We also asked respondents about how related the training in their EFE classes was to their current job. Just over 40 percent of the respondents indicated that it was relevant; conversely about 60 percent indicated that their EFE training had "hardly any" or "no" relatedness to their current job. Among the population groups, students who did not participate in a work-based program experience and students who did not go on to postsecondary education reported a much lower rate of training-relatedness than their population counterparts. The rates of training-relatedness of current jobs was about 10 percentage points lower than comparable 1996 data for almost all groups. The only population group to have experienced an increase in training-relatedness was minority students.

The unemployment rate is defined as the share of the labor force who are not working for pay and are looking for employment. For the sample as a whole, the unemployment rate was 10.8 percent in 1997, much higher than last year's 6.5 percent, and much higher than the county's

unemployment rate of 4.8 percent this summer. Note that it was much higher for minorities, 17.6 percent, than whites, 8.6 percent, and it was much higher for individuals who did not attend postsecondary education, 14.0 percent.

High School and EFE Program Experiences

The follow-up survey asked the respondents to recall their experiences in high school and in their EFE courses. Table 6.3 presents summary data on (self-reported) grade point averages in high school and on incidents of tardiness and absences. It is interesting to note that these young individuals recalled far fewer incidents of tardiness or absences in their senior year of high school than the current students reported. This data, of course, is subject to recall error since it pertains to a time period of over a year prior to the survey date.

Table 6.3
High School Experiences as Recalled by EFE Completers

	Sex		Race		Work-based program		Postsecondary			
Characteristic	M	F	W	NW	Yes	No	2-yr	4-yr	No	Total
Average number of tardies (n = 263)	6.11	5.02	5.39	6.97	5.26	5.79	5.53	5.07	6.35	5.59
Average number of absences (n = 278)	5.45	4.92	5.30	4.49	5.75	4.86	4.74	4.73	6.36*	5.19
Average GPA (n = 304)	2.84*	3.20	3.05*	2.77	3.16*	2.93	2.92	3.37*	2.73*	3.01 (B)

* Difference between population groups is statistically significant at the .05 level.

The overall mean high school GPA as recalled by the follow-up sample, 3.01, is higher than the average reported by current students. Each of the population groups had significant differences from each other in GPA. Males reported lower GPA's in high school than females. Whites had higher GPA's than nonwhites, and students who participated in work-based programs had higher GPA's than the students who did not participate in such experiences. Finally, as expected, students

who went on to four-year colleges/universities reported higher high school GPA's than students in two-year institutions or those who did not choose to pursue further education.

Table 6.4 provides identical data on EFE class satisfaction indicators for the completers as Table 3.3 does for current students. Of course, the follow-up survey asked respondents to think back about their EFE classes, which they would have been enrolled in over a year before, and to provide their opinions about those classes. The current students were providing assessments of classes they

Table 6.4
EFE Program Satisfaction Indicators from Completers

	Sex		Race		Work-based program		Postsecondary			
Indicator	M	F	W	NW	Y	N	2-yr	4-yr	No	Total
Agree/strongly agree with "The classes are among the best..."	86	78	83	79	85	80	82	77	86	82
Disagree/strongly disagree with "These classes are too hard..."	94	98	97*	86	98	95	97	100*	91*	96
Agree/strongly agree with "I got along with other students and we worked together..."	94	96	95	94	94	95	96	98	89*	95
Agree/strongly agree with "The equipment and facilities were excellent."	83	83	83	82	82	84	81	85	82	83
Disagree/strongly disagree with "not enough information..."	82	87	95	79	89	82	92*	83	78*	84
Agree/strongly agree with "The program treated everybody fairly."	92	87	91	88	91	90	95	94	83*	91
Agree/strongly agree with "I could get questions answered..."	94	93	94*	85	93	93	97	94	88*	93
Disagree/strongly disagree with "the program seemed disorganized."	90	80	85	85	83	86	92*	85	79*	85
Letter grade for program quality	3.42	3.44	3.46	3.26	3.60*	3.33	3.45	3.53	3.32*	3.43 (A-/B+)

Note: Table entries for the first eight rows are proportion of the sample who gave a favorable rating of 1 or 2 (or 4 or 5 for the negatively worded items) on a 5-point Likert scale. Item nonresponses are not included in the denominator. However, response of "Neither agree or disagree" is included. Overall sample size is 322. Approximately 30 cases are missing for each item. Sample size for average letter grade is 294.

* Difference between population groups is statistically significant at the .05 level.

were enrolled in at the time. The completers reported much higher levels of satisfaction than current students. The first item listed in the table asked for respondents to agree or disagree with the statement that "EFE classes were among the best classes in high school." Over 82 percent of the respondents agreed with this statement. Over 95 percent of the respondents disagreed with the statement that "these classes were too hard." Students who attended postsecondary schooling and whites disagreed more than those who didn't and minority students. Almost 95 percent of the sample agreed with the statement, "I got along well with other students and we worked together frequently." Fewer respondents who were not attending postsecondary education agreed than respondents who were pursuing college.

Almost 85 percent of the sample agreed the "equipment and facilities were excellent," and about the same percentage disagreed with the statement that "not enough information was provided to students or their parents." No differences among population groups on these two items were statistically significant.

A little over 90 percent of the respondents agreed that "the program treated everybody fairly." Postsecondary students were in more agreement than students who were not in college. In the case of agreement with the statement that "I could get questions answered and problems easily resolved," minority students were in less agreement than whites. All together, though, almost 95 percent of the sample agreed. Finally, just over 85 percent of the respondents disagreed with the statement that "the program seemed disorganized." Males were more positive than females—almost 90 percent of the males disagreed with the statement as compared to 80 percent of the females. Also postsecondary students were less concerned about disorganization than were the students who were not pursuing postsecondary education.

As with the current students, the follow-up survey asked respondents to assign a letter grade to the EFE courses that represented their assessment of quality. The overall average for this grade, converted to a 4.0 scale, was 3.43, which would be right between and A and a B. Whites, students who participated in work-based programs, and students attending four-year postsecondary institutions assigned the highest grades for quality. Few differences exist between the quality indicators in table 6.4 for this year and those from last year.

Table 6.5
Best and Worst Aspects about EFE Program as Recalled by Completers

Aspect	Number of Times Mentioned
Best	19
Equipment	31
Books, software	14
Pace	44
Hands-on	81
Specific teacher	17
Individual attention	60
Skills/experience	56
Work-based	6
College usefulness	10
Interesting/fun	23
Other students	7
Everything	31
Other	4
Nothing, no best thing	15
Total	418
Worst	
Equipment	20
Books, software	15
Pace: too easy	20
Pace: too fast	7
Pace: too much work	11
Specific teacher	35
Transportation/schedule	13
Guidance counselors	2
Classmates	14
Environment	1
Work experience	11
Other	5
None	86
Total	240

Table 6.5 tallies responses to the questions of what were the best and worst aspects of the EFE classes. Among the best aspects were specific teachers or staff persons, the skills and experiences that the students indicated that they had learned, the opportunity to participate in work-based learning opportunities, and hands-on instruction. Far fewer negatives were mentioned. In fact, the response mentioned the largest number of times was that there were "no worst aspects," i.e., everything was fine. But among the complaints, the most often mentioned aspects were particular staff persons, equipment, and pace was too easy.

Respondents were also asked to recall work-based experiences. Table 6.6 summarizes these data. All together, 37 percent of the respondents indicated that they had participated in a work-based program. (This is somewhat higher than the 22 percent of current students who reported that they were participating in work-based programs.) Of those who reported that they had participated in a work-based program, a little over half indicated that it had been a paid experience. Males, minority students, and individuals who did not attend a postsecondary institution indicated that their work-

Table 6.6
EFE Work-based Program Experiences as Recalled by Completers

Characteristic	Sex		Race		Postsecondary			Total
	M	F	W	NW	2-yr	4-yr	No	
Participation (n = 304)	33.1	41.0	38.3	26.3	43.1	35.3	31.9	36.8
If Participated: (n = 111)								
Paid?	73.6*	34.5	50.0*	88.9	48.8	34.3*	83.9*	53.2
Disagree/strongly disagree with "Work was unrelated..."	74	77	76	71	76	74	74	76
Agree/strongly agree with "Mentors were supportive and answered my questions."	86	96	93	71	93	97	82*	91

Note: Table entries are sample percentages.
* Difference between population groups is statistically significant at the .05 level.

based experiences were more often paid than females, whites, or college attenders. Note that only about a third of females and students who went on to four-year colleges/universities who were in work-based programs were paid. These data were comparable to 1996 data, although the percentage of students who recalled a work-based program experience in 1997 was higher (for all population groups) and the percentage of experiences for which pay was received was also slightly higher.

About three-quarters of the respondents who had been in work-based programs disagreed with the opinion question that "the work was unrelated to the EFE class." Over 90 percent agreed that "workplace mentors were supportive and answered my questions." There were slight differences among population groups on these two opinion items. In particular, females were more satisfied with workplace mentors than were males, and students in a postsecondary institution were more satisfied with mentors than were individuals who did not attend.

EFE Outcomes

Two performance indicators of EFE outcomes are presented in table 6.7. The first indicator measures what percentage of EFE completers were either attending college or were employed one year after completing their high school course(s). Overall, about 92 percent of the sample met these criteria. This is true despite lower employment rates of students. Females had a higher percentage than males. Minorities had a lower percentage than whites, although the difference is not statistically significant and the difference had decreased over time. (It is not sensible to look at this standard

Table 6.7
EFE Performance Indicators

	Sex		Race		Work-based program		Postsecondary			
Indicator	M	F	W	NW	Y	N	2-yr	4-yr	No	Total
Postsecondary attendance or employed	88.8*	95.4	92.6	87.5	92.9	93.2	100.0	100.0	76.2	91.9
Training-related postsecondary attendance or employment	57.0	66.0	62.2	54.3	69.7*	57.4	74.5	82.5	27.8	61.3

Note: Table entries are sample percentages. Sample size is 372 for first row and 302 for second row.
* Difference between population groups is statistically significant at the .05 level.

disaggregated by the different types of college attendance because all college attenders meet the standard, by definition.) A problem with this standard is that it is not difficult to meet. A summer telephone interview of almost any population of 19-year-old's would yield high percentages of respondents who were either attending college during the academic year or currently working. Indeed, the percentage was about 90 in 1996.

The second indicator is somewhat more applicable. This standard measures the percentage of individuals pursuing a major field or occupational program area in a postsecondary setting that is related to the coursework taken in high school or who were employed in a job where their EFE coursework was related. The overall percentage for this sample was 61 percent, somewhat lower than the 65 percent from last year. Females and whites had higher percentages than males and nonwhites, respectively, although these differences were not statistically significant. However, students who were in a work-based program had a higher percentage than students who had not been in such a program, 70 percent versus 57 percent. Finally, students in postsecondary institutions had a higher percentage than those who did not attend college.

7. Findings and Recommendations

The purpose of this last chapter is to highlight the major findings from the data analyses and to offer recommendations to EFE administrators to consider as they shape their programs and practices. In some cases, these recommendations are based on rigorous analyses of the data. In other cases, the recommendations are based on anecdotal evidence that may have been derived from comments that respondents made. I will try to explain the basis for each recommendation.

Bottom Line Assessment

EFE offers excellent programs that result in high levels of customer (stakeholder) satisfaction.

In all of the surveys that were conducted, respondents were asked several questions about their satisfaction with various aspects of EFE classes and programs. As shown in table 3.3, 70 to 85 percent of current students were pleased with various aspects of their EFE classes. The students gave their classes a high letter grade for quality. Tables 4.2 and 4.4 show that parents were happy with their students' EFE classes and with the consortium, respectively. EFE completers were asked for their opinions about the same aspects of their EFE classes as current students were, and table 6.4 shows that their (recalled) levels of satisfaction were even higher than current students'.

EFE has some excellent teachers who are impacting students. Even many EFE completers report one year after their enrollment that their favorite aspect of the EFE class was their instructor. But EFE also has some teachers that are not liked or impacting students. Thus, like any organization, EFE needs to have rewards/ incentives and sanctions/correctives.

This assessment is based on the responses of students and completers to the opportunity to list the best and worst aspects of their EFE classes. Parents also sometimes referred to staff members

in their comments and suggestions. By far and away, more positive comments were received about staff than negative comments. And it was usually the case that multiple comments were received about teachers, either positive or negative.

Student/Parent Outreach

> *Parents/guardians play a passive role in enrollment decisions, but they should not be overlooked. EFE should send them information that includes course content and student expectations as well as economic outcomes such as expected employment, career ladders, and wage rates.*

The parents' roles in enrollment decisionmaking were, for the most part, passive. About half of the students indicated that they relied on parents'/guardians' advice and about two-thirds of the parents indicated that they played some role. However, only about one-eighth of parents indicated that they take an active role, and table 3.2 shows that only a quarter of the students reported that parents were among the most important individuals involved in their decisions to take the EFE class. Table 4.1 shows that parents relied on their students' knowledge and opinions, but that among types of information that they wished they might have were more information about the content of the EFE courses and information about career ladders and starting salaries in the occupation.

> *Guidance counselors are key gatekeepers to EFE enrollment. EFE should keep them well informed about classes and opportunities.*

Table 3.2 presents data that show the reliance of students on guidance counselors for advice about whether or not to enroll in EFE classes. The extent to which students relied on counselors for information and advice declined slightly (about 5 percent) between 1996 and 1997. Still, counselors are the most-often mentioned source of information and individuals in the decisionmaking process. About two-thirds of the EFE students relied on counselors. It thus behooves EFE to make sure that

counselors are well-informed about class offerings and opportunities for work-based experiences. Note that table 4.4 shows that some parents had negative comments about the role of counselors vis-a-vis EFE.

> *Academic teachers should not be overlooked as important gatekeepers for EFE. They should receive information about EFE programs and opportunities.*

Table 3.2 shows that a significant share (as high as a quarter) of students got advice from and listened to academic teachers or other school staff in making their enrollment decisions. This share actually increased slightly between 1996 and 1997. To the extent possible, EFE staff should keep all teachers informed about program opportunities and successes.

> *A high share of the students who enrolled in EFE classes, and work-based experiences in particular, pursued postsecondary education at two- and four-year institutions.*

About 85 percent of EFE students indicate that they plan to enroll in a postsecondary institution either right after high school or after working for a few years. The follow-up survey (table 6.1) shows that two-thirds of completers actually enrolled in postsecondary education right after high school. Oftentimes, parents and students misperceive EFE as being for non-college bound students. Thus it is important to provide them this evidence to show that such a stereotype is not correct.

School-Based Curriculum and Instruction

> *Standards and student expectations could be ratcheted up; projects and homework assignments should be interesting, challenging, and essential.*

As noted below, there is a significant caveat to this overall study of the EFE programs in that it doesn't address the impact of EFE on student achievement outcomes. Consequently, I have little

to say about curriculum and instruction. However, the students' comments about the worst aspects of the class and their response to the prompt that the "EFE class was too hard" suggest that a number of students thought that the pace was too slow or boring, that expectations were too low, and that too much "busy work" was assigned. This recommendation is based on these comments.

Work-Based Experiences

*EFE needs to improve the alignment between work-based experiences and school-based learning. Employers should **always** be asked for input and asked to evaluate school curricula.*

Table 3.5 shows that over one-third of the current EFE students who were engaged in work-based experiences did not disagree with the prompt that "the work they were doing was unrelated to school." Furthermore, table 6.6 shows that over 30 percent of EFE completers who had participated in work-based experiences did not disagree with this prompt. Table 5.8 reports that "classroom support for work experience" was the lowest rated aspect of EFE's internship programs as reported by employers. Finally, table 5.4 indicates that only 44 percent of the employers with internships advised schools on content of curriculum. It seems to me that as long as employers are receiving and agreeing to written plans for student internships, they should be asked for their assessment of and input into curriculum.

EFE should attempt to get a higher percentage of students in work-based experiences to have the chance to rotate through several occupations.

Table 5.4 shows that only a little over half of the student internships described by participating employers offered students the opportunity to rotate through several jobs. An important purpose of work-based experiences is career exploration, and so it would be in the best interest of

students to gather additional input by working in multiple job settings. The School-to-Work Opportunity Act of 1994 mandates programs to introduce students who are participating in work-based experiences to "all aspects of the industry."

> *A large share of EFE students hold part-time jobs which could be a significant learning resource, if an appropriate mechanism to integrate these experiences into the curriculum could be devised.*

Around 60 percent of current EFE students work in part-time (or full-time) jobs according to the survey data. Given the apparent advantages that work-based experiences provide to EFE students who participate in them, it would seem that there would be some benefit to try to integrate some of the workplace learning that must be taking place in part-time jobs into the curriculum. It is not clear how such integration could occur, however. At a minimum, both EFE and other subject matter teachers should be asking students about their out-of-school activities, including employment, and tailoring instruction to those activities as appropriate situations arise. However, there may be more formal mechanisms for integration.

> *Work-based experiences are matching students with caring and supportive workplace mentors. Little priority should be placed on mentor training since the status quo seems to be working very well.*

Three-quarters of current students engaged in work-based experiences (table 3.5) and over 95 percent of completers who had participated in work-based experiences (table 6.6) strongly agreed or agreed with the statement that their mentors were "supportive and answered questions." Among the current students, the satisfaction with mentors was even higher for female students who otherwise expressed some concerns about access to their EFE instructors. Thus the data suggest that the mentors may be overcoming some equity problems.

In reviewing the literature about school-to-work programs, mentor training is an issue that sometimes gets raised. It would appear to be low priority in the EFE service area, although there certainly may be circumstances where it would be important.

Employer Outreach

> *Students participating in work-based programs are productive. They're doing real work as well as or better than comparable employees. Many of the comparable employees have some postsecondary education.*

Employer data support this finding. Table 5.5 presents the result that 70 percent of the employers indicated that student interns' productivity equaled or exceeded that of entry-level workers. Table 5.6 shows that two-thirds of the employers would assign existing employees or hire new employees to perform the work that student interns were doing if they did not have access to those interns. Furthermore that table shows that almost a third of the entry-level workers who perform comparable work have some postsecondary education.

> *Employers' biggest concern about student interns is their lack of skills and maturity. This concern can be addressed by reminding employers that the students are in learning situations and they may make mistakes and by working with students to emphasize the importance of their behavior at the worksite.*

Data about concerns in working with student interns from both participant and nonparticipant employers are displayed in table 5.9. The most prevalent concern is the lack of skills and maturity that students exhibit. (In the table, these concerns are expressed as "students lack basic skills," "students are not always available when needed," and "students are unreliable or immature.") It seems to me that EFE can address this concern in a straightforward manner. When written agreements are being developed with employers or when employer contacts are being made, EFE

staff should emphasize the learning nature of the experiences. Students will not have and should not be expected to have all the skills or knowledge to discharge successfully the tasks they will be given. Furthermore, students will "test the boundaries" of what is appropriate in the work site environments.

At the same time, EFE staff need to communicate clearly to students what acceptable behaviors are in the work site, how that environment differs from school, and what the expectations are about learning and behavior. It is unlikely that this issue can be resolved totally, but explicit recognition of the problems may ease concerns.

> *It is unlikely that the number of employers willing to offer work-based program "slots" is the constraint on the availability of this type of learning experience. Many of the nonparticipant firms that were surveyed had not been approached, and two-thirds of them indicated that they would consider participating if they were asked.*

The survey of nonparticipants attempted to delve into reasons why firms were not engaged in student internships. Lack of familiarity or awareness was not a major problem. Many of the nonparticipants were aware of EFE. However, only about one-seventh of the establishments had been approached about collaborating with EFE. Among all of the nonparticipants, about two-thirds indicated that they would consider hosting student interns.

> *In "selling" EFE to employers, staff should refer to potential benefits in existing employee morale.*

Anecdotes from the survey of participating employers and from other surveys indicate that an unexpected benefit of having students in the workplace is on the morale of existing workers. Workers like to teach young people and they like the vitality and vibrance that students bring to the workplace. Researchers' expectations were that current employees would tend to resist student internships because of the potential for displacement of employment, but in fact, just the opposite

seems to be occurring in many establishments. Workers are among the biggest advocates once they have become involved.

Equity Issues

Minorities are less satisfied with their EFE experiences and have much lower rates of positive outcomes than whites. Two recommendations are that EFE (1) consider whether they could play a role in placement for ex-students and (2) consider establishing an ombudsman staff person who could advocate for minorities or other students with problems.

In table 3.3, we see that the average grade that white students assign to the quality of their EFE class is 3.35. For minorities, the average is 3.14. Eighty-three percent of the white students agree with the statement, "I get along with other students and we often worked together in class." Among current students, 80 percent of minority students agreed. In table 6.4, we see that a similar, but much smaller, racial gap exists among the EFE completers. But, perhaps of more concern, is the significant racial gap in postsecondary and employment outcomes shown in tables 6.1 and 6.2. Over 86 percent of whites were employed; only 76 percent of nonwhites were employed. The unemployment rate for persons of color was 17.6 percent.

Two recommendations might be suggested. First, perhaps EFE could assist former students with part-time, summer, or permanent job placement or encourage students who are having difficulty finding work to contact EFE staff for referrals to agencies that could help with placement. Such placement assistance could be used in conjunction with an EFE skill certificate. Students who complete EFE and have a skill certificate could be entitled to the placement assistance. Second, perhaps EFE could establish a staff ombudsman position. The duties of this job would be to be an advocate for students and try to resolve problems that may arise.

Outcomes

The career aspirations of EFE students seem skewed toward white collar, professional occupations. EFE might consider an effort to inform students and parents about the employment and earnings payoffs to clerical, craftsperson, and technician occupations.

As shown in table 3.7, the career plans of EFE students are skewed toward professional and managerial occupations. Only about one-fifth of the current students saw themselves in clerical, crafts, or technician jobs when they were 30 years old. Over 60 percent aspired to manager, professional, school teacher, or ownership occupations. The occupational distribution in the labor force is almost exactly opposite—only one-fifth of jobs are in professional or managerial occupations. Thus there is a mismatch between the aspirations of EFE students and where they will end up in their careers. Some of this mismatch might be ameliorated by better information or more widely disseminated information on the employment and earnings prospects of certain occupations. In particular, many analysts are forecasting dire shortages and consequent wage growth in jobs that require less than a baccalaureate degree, such as technicians.

This assessment does not examine the important issue of student academic achievement.

Finally, it should be recognized that EFE is part of the educational system in the county, and the primary outcome of this system is academic achievement. All students need to be educated to their full potential. The data that indicate that EFE students have high planned and actual rates of postsecondary attendance suggest that academic achievement was being reached. But, EFE needs to evaluate the performance of its students on assessments such as the high school proficiency test, the Scholastic Assessment Test (SAT), or the ACT. EFE might consider an assessment system that

documents pre- and post-learning. Under the competitive pressures that are being thrust upon education, the future of EFE will ultimately depend on its ability to enhance student learning.